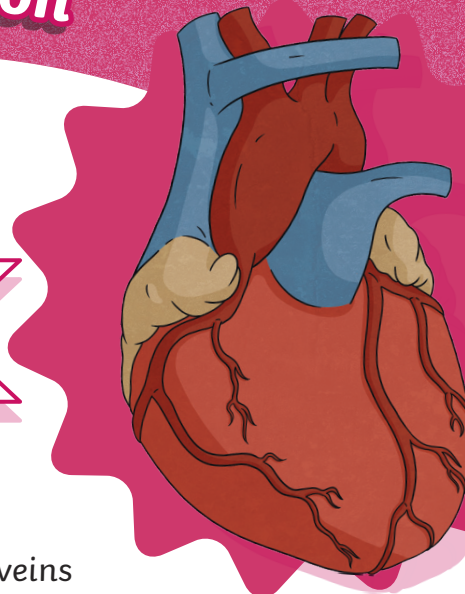


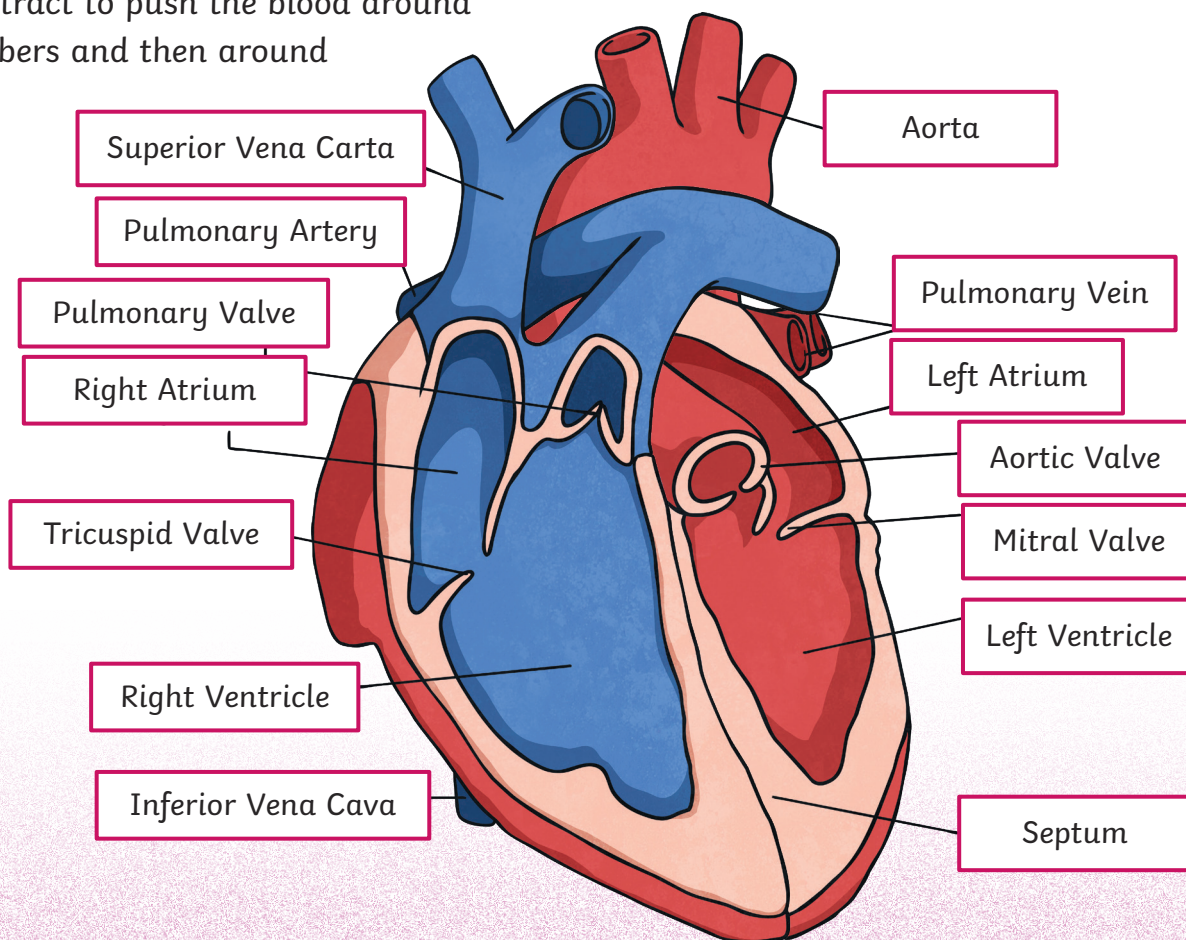
## The Human Heart



The heart is part of the circulatory system, which is a network within the body. In simple terms, the heart pumps blood around the body in veins and arteries. The blood transports vital nutrients, water and oxygen around the body.

### Heart

The heart is a powerful muscle protected by the ribcage. It is located between the lungs and is roughly the size of a large fist. The heart is made up of four chambers: the right atrium, the left atrium, the right ventricle and the left ventricle. The muscles in your heart contract to push the blood around the chambers and then around the body.



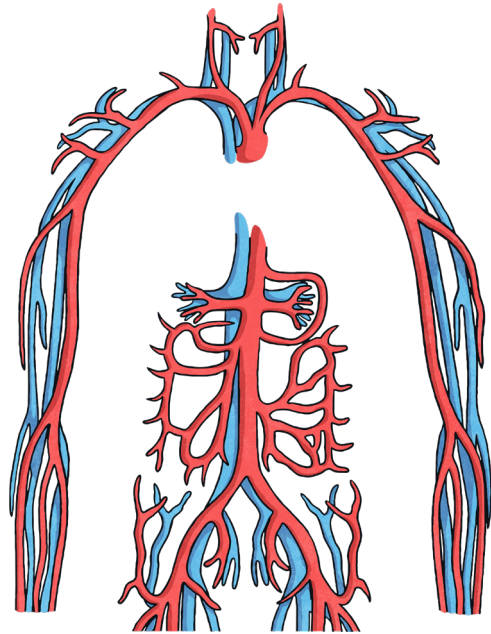
## The Human Heart

**Veins**

Veins are blood vessels that carry blood to the heart. The blood carried by veins has been **deoxygenated**. Deoxygenated blood enters the heart through the right atrium before passing through into the right ventricle. This blood is then pushed through the **pulmonary arteries**, which carry the blood cells to the lungs where they can be filled with oxygen.

**Arteries**

Arteries are blood vessels that carry blood away from the heart. Blood carried by arteries has been **oxygenated**. Oxygenated blood enters the heart through the left atrium before passing through the left ventricle. The blood is then pushed through the **aorta**, where it travels on through the rest of the body to deliver oxygen and nutrients to cells and muscles.

**Keeping Your Heart Healthy**

The heart is a muscle. Each heartbeat is the muscle contracting - squeezing tight before pumping your blood around your body. Like any muscle, the heart needs to be looked after. Exercising regularly is a great way to keep your heart healthy. It is believed that eating a balanced diet including lots of fish rich in omega-3, lean meat such as turkey and whole foods such as fruit, vegetables and whole grains can have a positive effect on your heart's health.

## The Human Heart

**What is a heart rate?**

Your heart rate is the number of times your heart beats in a minute. Your heart rate changes depending on various factors, including how active you are or if you're feeling unwell, stressed or **dehydrated**. Everyone's heart rate is different but a 'normal' resting heart rate for a healthy adult is between 60 and 100 beats per minute. A fast resting heart rate might cause you to feel dizzy or faint. A good way to regulate your heart rate is by drinking water. When you exercise, your cells and muscles

need more oxygen-rich blood to keep them working. This means that your heart needs to work harder to pump blood around the body, which means that your heart rate will increase. Try measuring your pulse while you are resting and then measuring your pulse again when you've just finished doing some exercise. You should notice a difference.

**Heart Facts**

- Although your veins appear blue, blood is actually always red. When oxygenated, blood is bright red. When deoxygenated, blood is dark red.
- If you were to lay out your veins, arteries and capillaries end to end, they would stretch for approximately 60,000 miles.
- It takes around 20 seconds for blood to circulate the human body.

## The Human Heart

### Glossary

**deoxygenated:** deoxygenated blood has more carbon dioxide than oxygen

**oxygenated:** oxygenated blood is oxygen-rich

**dehydrated:** not having enough water in the body

**capillaries:** blood vessels that connect arteries and veins

**pulmonary arteries:** blood vessels that carry blood from your heart to your lungs

**aorta:** the largest blood vessel which carries blood from the heart to the rest of your circulatory system

## The Human Heart

## Questions

1

How does the way the writer has organised this text make it easier to understand?

---

---

2

Why has the writer included a glossary?

---

---

The blood transports vital nutrients, water and oxygen around the body.

3

Which of these words is an antonym for **vital**?

- crucial
- unnecessary
- important
- efficient

The Human Heart

4

Draw lines to match the parts of the circulatory system to their function.

- |                    |   |
|--------------------|---|
| veins              | carry blood from the heart to the lungs             |
| arteries           | carry blood away from the heart                     |
| capillaries        | carries blood to the rest of the circulatory system |
| pulmonary arteries | connect veins and arteries                          |
| aorta              | carry blood to the heart                            |

5

What are two ways that the writer suggests you can keep your heart healthy?

---

---

6

Summarise what this text tells you about heart rate in as few words as you can.

---

---

7

Why does your heart rate increase when you are exercising?

---

---

The Human Heart

8

Tick these statements to show whether they are true or false.

	true	false
The heart is made up of six chambers.		
Blood cells are carried to the lungs where they become oxygenated.		
Your heart rate can speed up if you are feeling stressed.		
It takes 30 seconds for your blood to circulate around your body.		

9

Why do you think that the writer suggests that eating foods, such as fruit, vegetables and whole grains can keep your heart healthy?

---



---

10

The writer has included an introduction but hasn't included a summary to end the text. Can you write one?

---



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## Answers

1

How does the way the writer has organised this text make it easier to understand?

**The writer has divided the text into paragraphs with subheadings so that the reader can find the information they need quickly. The writer has also included pictures to match each paragraph.**

2

Why has the writer included a glossary?

**The text uses lots of technical vocabulary so the writer has added a glossary in case the reader doesn't know what those words mean.**

The blood transports vital nutrients, water and oxygen around the body.

3

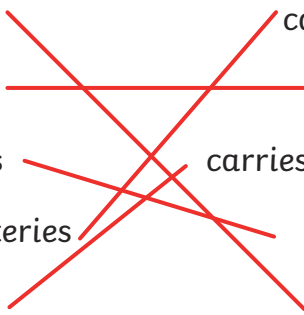



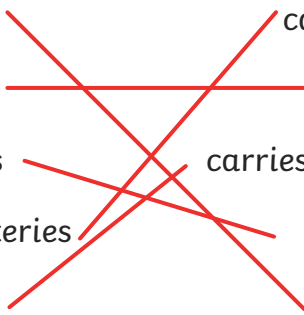
Which of these words is an antonym for **vital**?

- crucial
- unnecessary
- important
- efficient

The Human Heart

4

Draw lines to match the parts of the circulatory system to their function.

veins		carry blood from the heart to the lungs
arteries		carry blood away from the heart
capillaries		carries blood to the rest of the circulatory system
pulmonary arteries		connect veins and arteries
aorta		carry blood to the heart

5

What are two ways that the writer suggests you can keep your heart healthy?

1. Exercising regularly
2. Eating a balanced diet

6

Summarise what this text tells you about heart rate in as few words as you can.

**Heart rate is the number of times your heart beats in a minute, which can change depending on factors such as how active you are and if you are unwell or stressed. A normal resting heart rate is between 60 and 100 beats per minute.**

7

Why does your heart rate increase when you are exercising?

**Your heart needs to beat faster to make sure your cells and muscles are getting enough oxygen.**

The Human Heart

8

Tick these statements to show whether they are true or false.

	true	false
The heart is made up of six chambers.		✓
Blood cells are carried to the lungs where they become oxygenated.	✓	
Your heart rate can speed up if you are feeling stressed.	✓	
It takes 30 seconds for your blood to circulate around your body.		✓

9

Why do you think that the writer suggests that eating foods, such as fruit, vegetables and whole grains can keep your heart healthy?

**Child's own answer, such as:**

- **Fruit, vegetables and whole grains might contain vitamins that are good for your heart.**
- **These foods don't contain much fat which might be bad for your heart.**

10

The writer has included an introduction but hasn't included a summary to end the text. Can you write one?

**Child's own answer summarising the key points of the text.**

We hope you find the information on our website and resources useful. As far as possible, the contents of this resource are reflective of current professional research. However, please be aware that every child is different and information can quickly become out of date. The information given here is intended for general guidance purposes only and may not apply to your specific situation.



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