

The Circulatory System

The circulatory system is an essential part of our body. 'Circulatory' means something that is going on a continuous circuit. This is exactly what is happening in our bodies all the time.

What Circulates and Why?

The simple answer is it's your blood that is circulated all around your body. The blood is playing an important role...it is taking oxygen (O₂) all around the body to all the places it is required. The oxygen is collected when we breathe in and goes into our lungs. Once in the lungs, this oxygen enters our blood and starts its journey around the body. You could think of the blood cells a bit like delivery drivers that drop off the oxygen to where it needs to be. Oxygen is dropped off all around the body to the capillaries, which are fine blood vessels that transfer the oxygen to all the cells in the body.

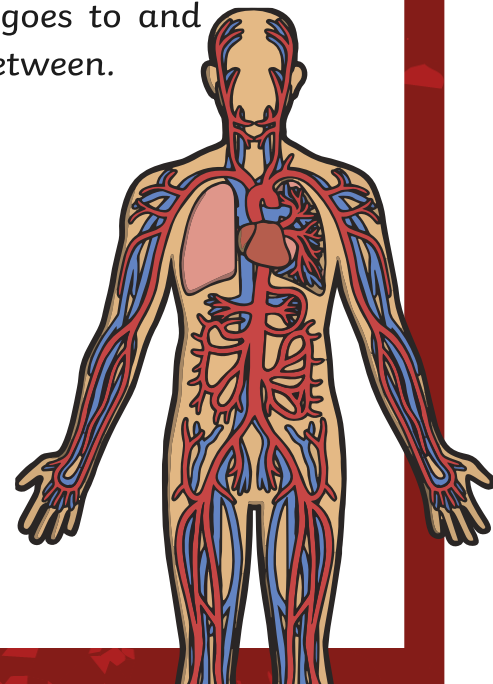


The Heart

Literally, the heart is at the heart of it all! Without the heart, no blood would get anywhere around your body. The heart is basically a big pump that constantly pumps the blood around the circulatory system. This has to happen all the time (even when you are asleep) to keep you alive. There are two loops in the circulatory system; the first goes to and from the heart, visiting the lungs to collect oxygen and get rid of carbon dioxide. The other loop is significantly longer and goes to and from the heart, but travels all around the body in between.

Did you know?

- In the average person, the heart beats about 2,500,000,000 times during a lifetime.
- Amazingly, it only takes about 20 seconds for one red blood cell to go round the whole body.
- Red blood cells last approximately four months before your body renews them.

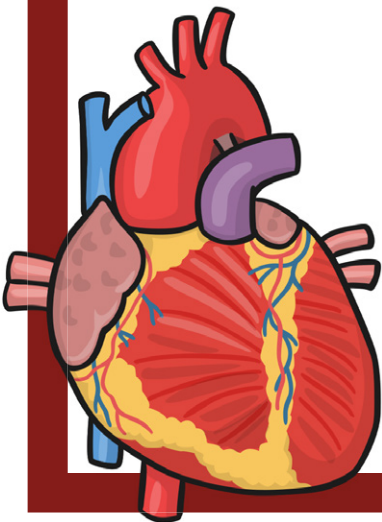


The Other Half of the System

We've already talked about the blood in your system collecting oxygen and delivering it all around the body, but it also carries out an equally important role in taking carbon dioxide (CO₂) from your body and delivering it back to the lungs. The waste product is then expelled from the body when you exhale. If we think of our blood cell delivery drivers again, they also collect the waste and take it away again. So, they are delivery drivers and waste disposal agents all in one!

Did you know?

- If you put one adult's veins, capillaries and arteries end to end, it would stretch 60,000 miles which would circle the Earth two and a half times!



The Circulatory System Questions

1. What are the scientific symbols for oxygen and carbon dioxide?

2. In 'The Heart' paragraph, what does the phrase, 'at the heart of it all' mean?

3. How long does it take for one red blood cell to go round the body?

4. Write down in words how many times the average heart beats in one lifetime.

5. What does your body need to get rid of that is taken away by your blood?

6. What do capillaries do?

7. In the final paragraph, the author has used an apostrophe to create a contracted word. What should the full words be?

8. Find four conjunctions in the text.

9. What simile is used to describe the blood cells? Why?

10. What is the most interesting piece of information you have read in this text and why?

The Circulatory System **Answers**

1. What are the scientific symbols for oxygen and carbon dioxide?

Oxygen = O₂ Carbon dioxide = CO₂

2. In 'The Heart' paragraph, what does the phrase, 'at the heart of it all' mean?

Something that is at the centre/the most important/focus point of an activity or process.

3. How long does it take for one red blood cell to go round the body?

20 seconds

4. Write down in words how many times the average heart beats in one lifetime.

Two and a half billion / Two billion, five hundred million times in a lifetime.

5. What does your body need to get rid of that is taken away by your blood?

Carbon dioxide

6. What do capillaries do?

Transfer oxygen (and carbon dioxide) from (and to) the blood to (and from) the cells.

7. In the final paragraph, the author has used an apostrophe to create a contracted word. What should the full words be?

We've → We have

8. Find four conjunctions in the text.

Any four from: but, and, when, for, which, once, if, so

9. What simile is used to describe the blood cells? Why?

The blood cells are compared to delivery drivers as they transport important things all around our bodies.

10. What is the most interesting piece of information you have read in this text and why?

Open-ended for discussion