

# 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 (O<sub>2</sub>) 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.

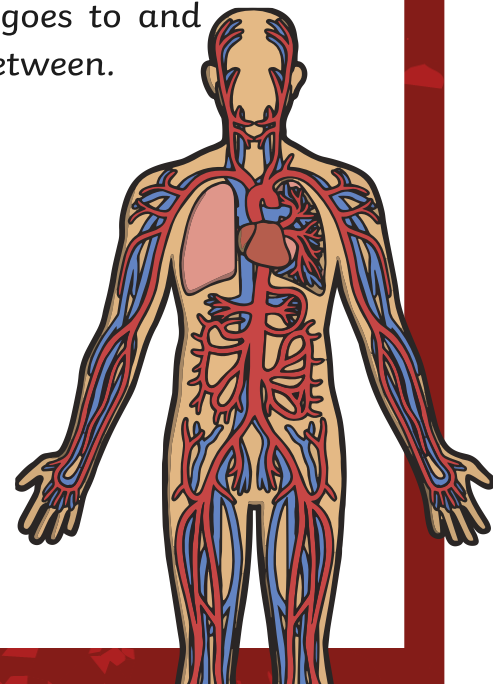


## The Heart

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.

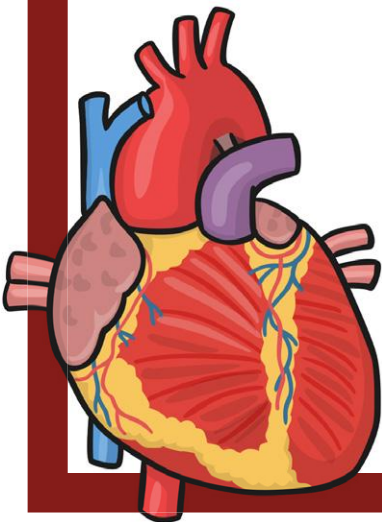


## The Other Half of the System

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 (CO<sub>2</sub>) 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?

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

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

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

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

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6. What do capillaries do?

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

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8. Find four conjunctions in the text.

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

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

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# The Circulatory System **Answers**

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

**Oxygen = O<sub>2</sub>    Carbon dioxide = CO<sub>2</sub>**

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**

# The Circulatory System

The circulatory system is a really important part of our body. The word 'circulatory' means something that is going round and round in a circle or loop. This is exactly what is happening in our bodies all the time.

## What Circulates and Why?

The simple answer is your blood is circulated all around your body. The blood is doing a really important job... it is taking oxygen all around the body to all the places it needs to go. The oxygen comes into your body when we breathe in and it goes into our lungs. Then, inside the lungs, this oxygen goes into 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 thinner blood vessels, which transfer (move across) the oxygen to the cells in the body.

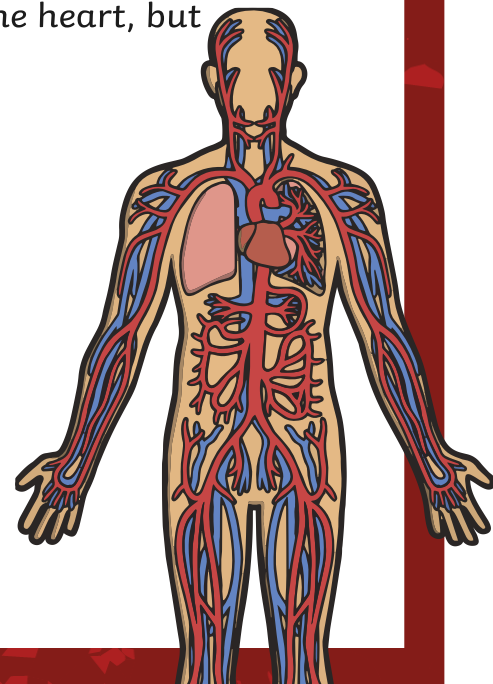


## The Heart

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 much larger and goes to and from the heart, but travels all around the body in between.

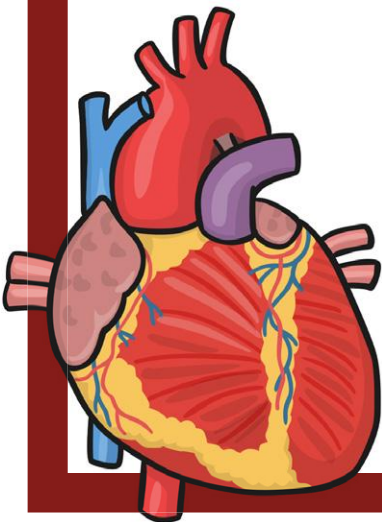
### Did you know?

- The average person heart will beat 2.5 billion times during a lifetime.
- Amazingly, it takes under 20 seconds for one red blood cell to go round the whole body.
- Red blood cells last about 4 months before your body makes new ones.



## The Other Half of the System

We've talked about the blood in your system collecting oxygen and delivering it all around the body, but it also does another important job. It also takes carbon dioxide from your body back to the lungs to be let out when you breathe out. If we think of our red blood cell delivery drivers again, they also collect the waste and take it away again. So, they are delivery drivers and waste disposers all in one!



# The Circulatory System Questions

1. What does 'circulatory' mean?

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2. What pumps the blood around your body?

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

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4. What is it that your body needs that gets delivered by the blood?

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

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6. The larger loop of the circulatory system goes all around to and from your heart, where does the other one visit?

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

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8. Find two conjunctions in the text.

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9. Find five verbs in the text.

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

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# The Circulatory System **Answers**

1. What does 'circulatory' mean?

**Travelling in a circle or continuous loop**

2. What pumps the blood around your body?

**The heart**

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

**20 seconds**

4. What is it that your body needs that gets delivered by the blood?

**Oxygen**

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

**Carbon dioxide**

6. The larger loop of the circulatory system goes all around to and from your heart, where does the other one visit?

**The lungs**

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

**We've → We have**

8. Find two conjunctions in the text.

**Any two from: but, and, when, for, which, so, if**

9. Find five verbs in the text.

**Any five from the text, e.g. doing, is, means, going, circulated, taking, comes, breathe, let out, does, starts, think, drop off, transfer, move, pumps, talked, travelling, collect, have, etc.**

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

**Open-ended for discussion**



# The Circulatory System

The circulatory system is in our body. The word 'circulatory' means something that is going round and round in a circle or loop. This is exactly what is happening in our bodies all the time.

## What Circulates and Why?

It is your blood that is circulated all around your body, and the blood is doing a really important job...it is taking oxygen all around your body to all the places it needs to go. The oxygen gets collected into your body when we breathe in, and it goes straight to your lungs. It's in the lungs that this oxygen goes into 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.

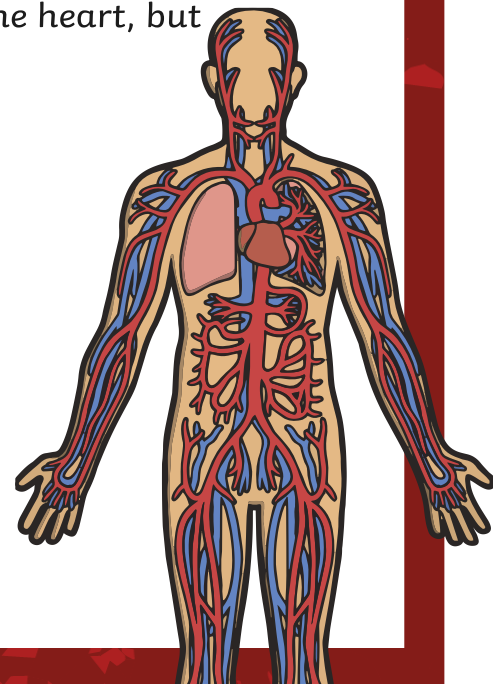


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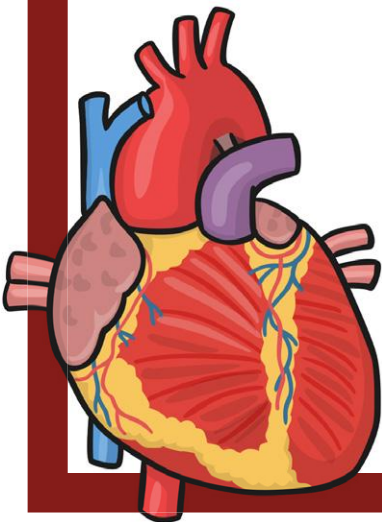


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# The Circulatory System Questions

1. Why is it called a 'circulatory system'?

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2. What pumps the blood around your body?

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

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4. What is it that your body needs that gets delivered by the blood?

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5. What is the final thing your body needs to do to get rid of unwanted carbon dioxide?

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6. The larger loop of the circulatory system goes all around to and from your heart, where does the other one visit?

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

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8. Find three conjunctions in the text.

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9. What are the blood cells compared to? Why?

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

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# The Circulatory System **Answers**

1. Why is it called a 'circulatory system'?

**The blood travels in a circle/continuous loop around your body.**

2. What pumps the blood around your body?

**The heart**

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

**20 seconds**

4. What is it that your body needs that gets delivered by the blood?

**Oxygen**

5. What is the final thing your body needs to do to get rid of unwanted carbon dioxide?

**Breathe out/exhale**

6. The larger loop of the circulatory system goes all around to and from your heart, where does the other one visit?

**The lungs**

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

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