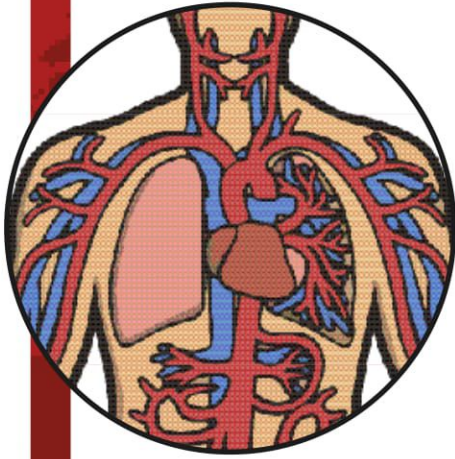


The Circulatory System

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 nutrients, hormones and oxygen all around the body to all the places they need 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.

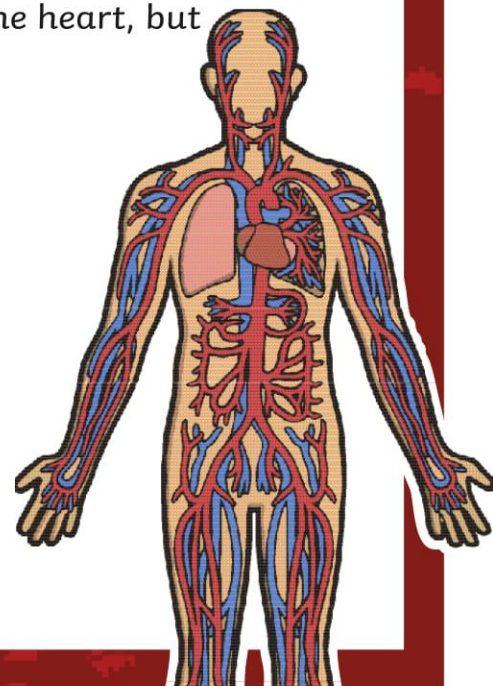


The Heart

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.

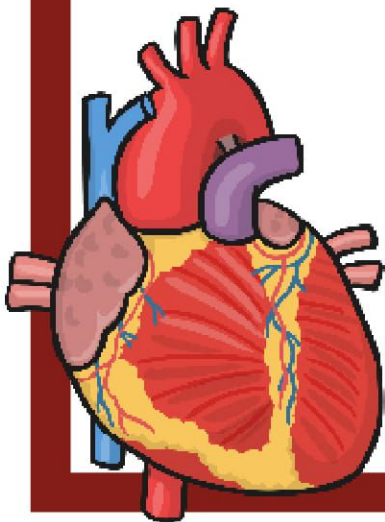
Did You Know...?

- The average person's 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, nutrients and hormones and delivering them 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?

2. What is circulated around the body with our blood? **Tick one.**

- ☐ nutrients
- ☐ oxygen
- ☐ hormones
- ☐ all of the above

3. In which organ does the oxygen go into the blood?

4. Why are there two loops in the circulatory system? What does each one do?

5. What waste product is removed through the lungs?

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

- ☐ 20 seconds
- ☐ 20 minutes
- ☐ 24 hours
- ☐ 24 minutes

7. What are the blood cells compared to?

8. Why is the heart so important? Use evidence from the text to explain fully.

RESPIRATORY CROSSWORD

Name _____ Day _____ Date _____

Air is inhaled through the mouth and nose. Air cavities called sinuses are in the head. The air goes through the pharynx, and the trachea, which divides and goes into each lung. The trachea is made up of cartilaginous rings. The lungs add oxygen to the blood and gets rid of carbon dioxide. This exchange of gases takes place in the tiny numerous air sacs called alveoli by way of very small capillaries. Once the trachea has divided, the two parts are the bronchial tubes. Your right lung has three lobes, your left lung has two lobes. The phrenic nerve controls breathing which is an involuntary process. The diaphragm and rib cage move down and inward when air is inhaled. Membranes surrounding the lungs and diaphragm are the pleura which provide a thin watery cushion.

Down:

- | | |
|---|-----------------------------|
| 1. vessels to body | 8. Bronchial _____ |
| 2. lung with two lobes | 9. protects lungs and heart |
| 3. strong breathing muscle | 10. tiny hairs |
| 4. lung with three lobes | 11. let out air |
| 5. Thick fluid in the sinuses | 12. air sacs |
| 6. element of living things _____ dioxide | 13. carries oxygen |
| 7. windpipe | 14. describes sinuses |

Across:

- | | |
|-------------------------|-----------------------------|
| 1. using air | 7. what we breathe |
| 2. organs for breathing | 8. alveoli |
| 3. opening for air | 9. part of lung |
| 4. membranes | 10. vessels to heart |
| 5. 4-chambered organ | 11. describes breathing |
| 6. bone like substance | 12. element we need to live |

