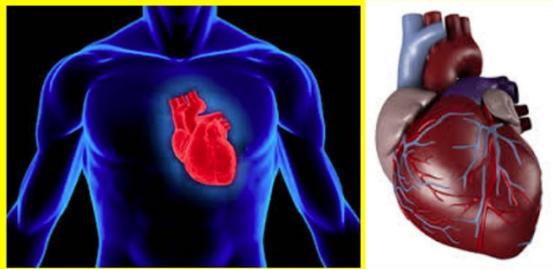


## QUICK SCIENCE STARTER

Calculate your heart rate by counting the beats for 10 seconds then multiply that by 6.



1. <http://www.bbc.co.uk/programmes/p01198ld>

## Lesson 1

**L.O.** To understand the organisation and extent of the circulatory system in the human body.

### The human circulatory system

This system is one of the most important in the human body. It is made up of 3 parts

- The heart
- The lungs
- The blood vessels



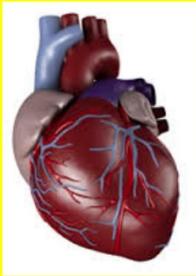
Let's find out more about each part of the circulatory system.   
(science powerpoint)

Tuesday 2nd February

### The human circulatory system

This system is one of the most important in the human body. It is made up of 3 parts

- The heart
- The lungs
- The blood vessels



What does the heart pump around your body?

How much blood is in your body?

- 1 litre
- 2 litres
- 3 litres
- 4 litres
- 5 litres



There are 5 litres of blood in my body.

**Blood** travels through the body in **blood vessels**.  2.



Identify the veins in your forearm. Estimate how wide they are? Press your thumb into your arm about 6cm from your hand, so that the veins stand out. Describe and explain the change.

(The swelling demonstrates that blood must be flowing through the veins, as the thumb is blocking its path like a dam in a river.)

Read through the powerpoint (science 2) and answer the questions

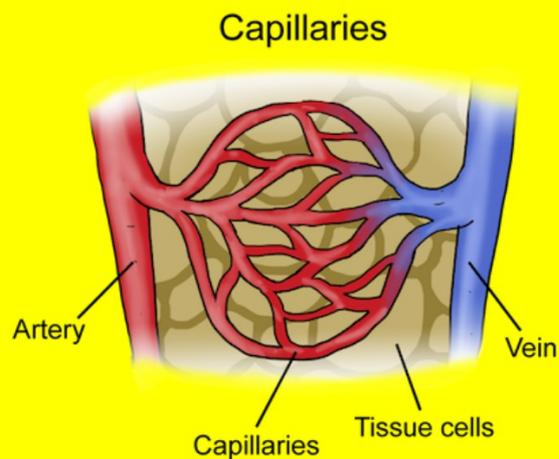
**What is our blood made up of?**

**What function does it have in our body.**

**How does the blood get to all parts of our body?**



## INFORMATION FOR OUR TASK



Blood can flow at about **40cm per second** in an artery but only about **0.5mm per second** in a capillary.

Why might this be? (arteries are wider than capillaries).  
Measure out the distances.

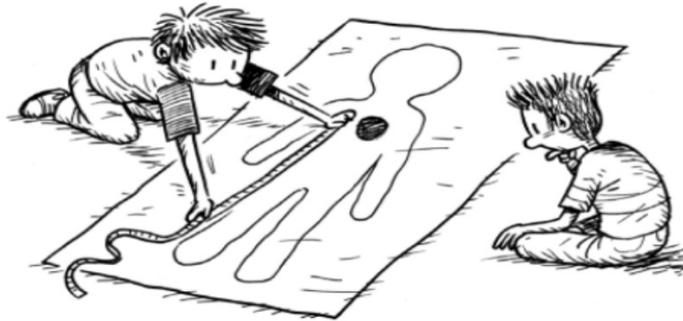
# TASK

## How fast does your blood flow?

- Work with a partner and take turns at drawing around your outline on a large sheet of paper.



- Your heart is about the size of a clenched fist and is in the centre of your chest. Draw your heart inside your body outline.
- What is the distance from your heart down one leg to the end of your toes?
- How long does it take for blood to travel from your heart to your toes and back again?



- How long does it take for blood to travel 1 cm through a capillary in your toe?