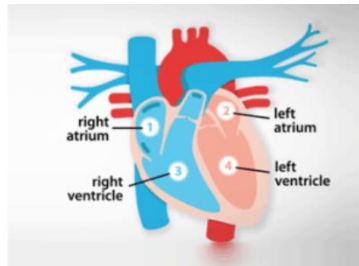


# The Heart



## The Science Bit

- The heart is a strong **muscle**, about the size of your fist found almost in the middle of your chest.
- It continuously pumps about 5 litres of blood around your body using your blood vessels.
- This blood **delivers oxygen and nutrients** all over your body which help your organs and muscles to work properly. Your blood also **carries away** unwanted **waste products** like carbon dioxide.
- The heart has a left and right side which are separated by a thin, muscle wall called the **Septum**.
- The top sections (upper chambers) are called the **left** and **right atrium**.
- The bottom sections (lower chambers) are called the **left** and **right ventricles**.
- The **right** side of your heart receives the **de-oxygenated** blood that has just travelled round your body. It pumps the blood to your lungs to collect a fresh supply of oxygen.
- The **left** side of your heart pumps the **re-oxygenated** blood round your body again.
- Your heart is keep beating rhythmically by electrical signals which tell your heart when to relax and contract.
- The electrical signals are sent from the sinus node (your heart's own natural pacemaker). Usually, the sinus node will send the electrical signals at a steady pace, but your heart rate can change depending on your emotions and if you are active or resting.

## Ideas to take it further

What happens if the rhythm of the heart is interrupted?

What is a defibrillator and why do you see them all around the place?

Time to look into some basic first aid skills.



## Fun Heart Facts and Information

1. Your heart will beat about 115,000 times each day and pump about 2,000 gallons of blood.
2. The heart can continue beating even when it's disconnected from the body.
3. The first open heart surgery occurred in 1893. It was performed by Daniel Hale Williams, who was one of the few black cardiologists in the United States at the time.
4. The fairy fly, (a type of wasp) has the smallest heart of any living creature.
5. Whales have the largest heart of any mammal.
6. The giraffe has a lopsided heart, with their left ventricle being thicker than the right. This is because the left side has to get blood up the giraffe's long neck to reach their brain.
7. A woman's heart beats slightly faster than a man's heart.
8. The beating sound of your heart is caused by the valves of the heart opening and closing.