

Vocabulary		
1	Heart	The heart is a muscular organ in most animals, which pumps blood through the blood vessels of the circulatory system.
2	Aorta	The aorta is the largest artery in the body. The aorta begins at the top of the left ventricle, the heart's muscular pumping chamber.
3	Ventricle	A ventricle is one of two large chambers toward the bottom of the heart that collect and expel blood received from an atrium.
4	Valve	The heart has 4 valves: The mitral valve and tricuspid valve, which control blood flow from the atria to the ventricles. The aortic valve and pulmonary valve, which control blood flow out of the ventricles.
5	Atrium	The atrium is the upper chamber through which blood enters the ventricles of the heart. There are two atria in the human heart.
6	Circulate	Move continuously or freely through a closed system
7	Blood Vessel	A tubular structure carrying blood through the tissues and organs.
8	Artery	A vessel which carries blood away from the heart to the organs.
9	Vein	A vessel that carries blood away from the organs to the heart
10	Capillary	A huge network of tiny vessels, link arteries and veins, throughout the body.
11	Blood	Red liquid that circulates in arteries and veins, carrying oxygen to and carbon dioxide from tissues in the body.
12	Lumen	A lumen (plural lumina) is the inside space of a tubular structure

What is the Circulatory System?

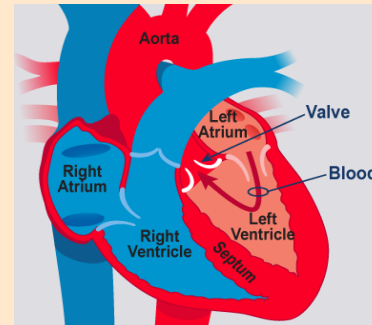
The Human Circulatory System allows blood to circulate and transport nutrients, oxygen, hormones and blood cells to and from the cells in the body to provide nourishment and help to fight diseases.

The circulatory system is made up of: the heart, blood vessels and blood.

Parts of the heart

The heart has four chambers. The two bottom chambers are the right ventricle and the left ventricle. These pump blood out of the heart. A wall called the interventricular septum is between the two ventricles.

The two top chambers are the right atrium and the left atrium. They receive the blood entering the heart.



How does the heart work?

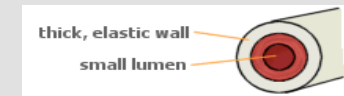
Both sides of the heart fill, contract and empty at the same time to give a co-ordinated heartbeat.

- **Ventricles contract** forcing blood out of the heart.
- **Valves prevent back flow** (heartbeat sound comes from these closing).
- Muscle of **left ventricle is thicker** than the right as it pumps blood around the body.

Functions of the blood vessels

Blood travels around the body in tubes called blood vessels. This movement of blood is called circulation. There are 3 types of blood vessels:

Arteries- Carry blood away from the heart to the organs. Bright-red oxygenated blood. Arteries stretch when blood goes through them and goes back to normal afterwards. We feel this as a pulse. Thick walls of muscle and elastic fibres. Dangerous to cut an artery as blood will spurt out rapidly with each heart beat



Veins- Carry blood away from the organs to the heart. Low in oxygen, deep purple-red colour. No pulse, thinner walls, have valves to prevent back flow.



Capillaries- Huge network of tiny vessels, link arteries and veins, throughout the body. Narrow, very thin walls, allows for short diffusion pathway.

