

**I GO WHERE
THE HEART
TAKES ME!**

DIANNA PUGA

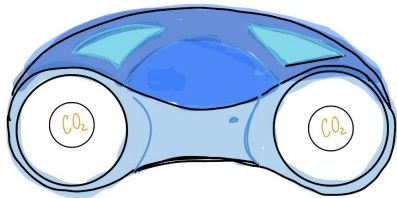
OBJECTIVES

- ❖ Explain the structure and function of the heart
- ❖ Know the path of blood through the heart and circulatory system

JOURNEY OF THE “ERYTHROMOBILE”

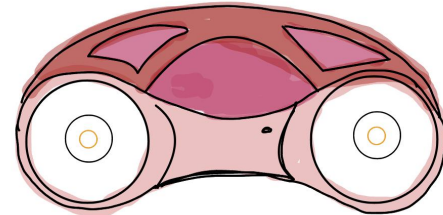
❖ 2023 Carbon Dioxide Edition:

- VENA CAVA
- RIGHT VENTRICLE
- TRICUSPID VALVE
- RIGHT VENTRICLE
- PULMONARY ARTERIES



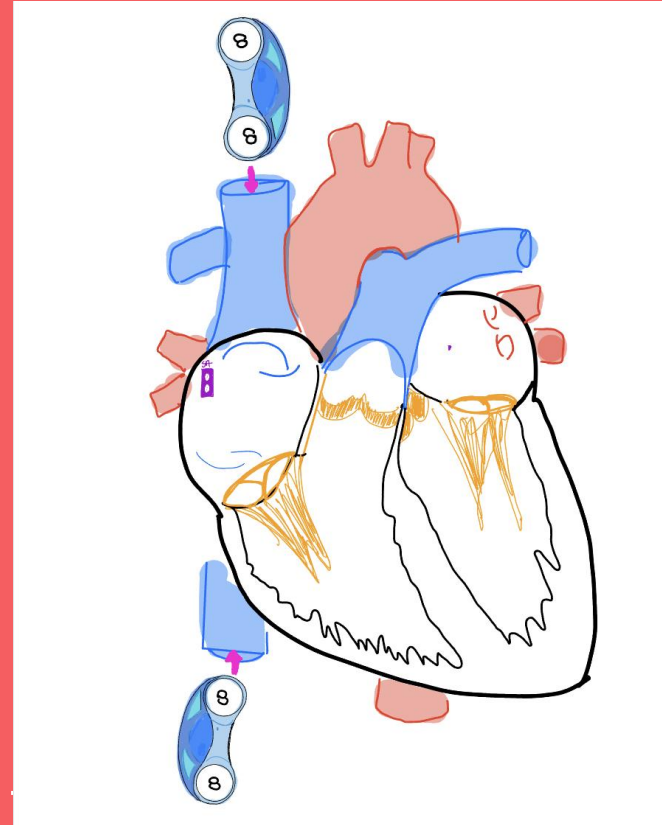
❖ 2023 Oxygen Edition

- LUNGS
- PULMONARY VEINS
- LEFT ATRIUM
- MITRAL VALVE
- LEFT VENTRICLE
- AORTA
- CAPILLARIES (BODY)



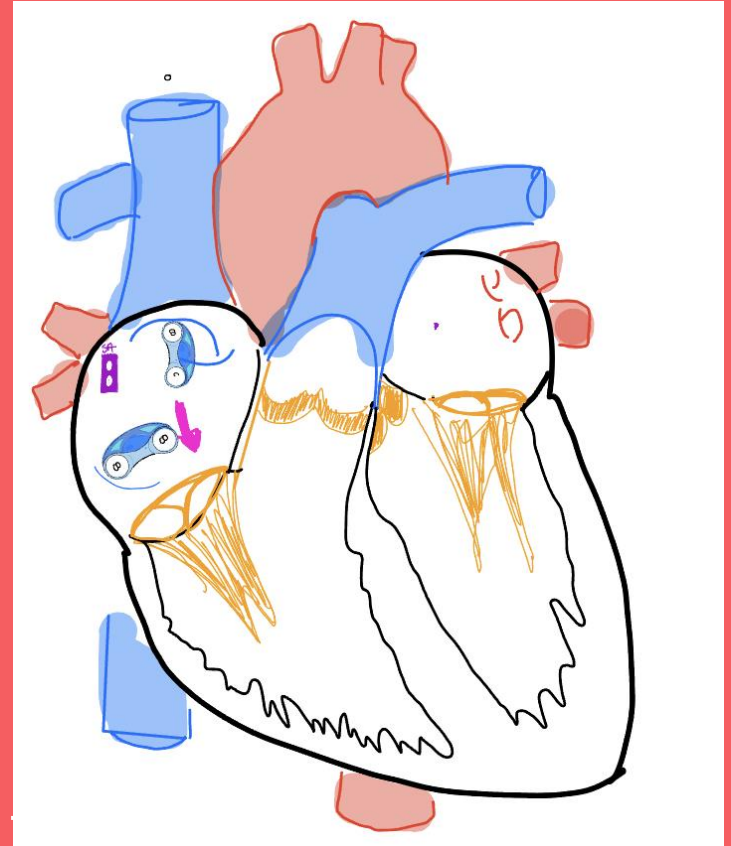
Vena Cava

- ❖ Blue erythromobile (more carbon dioxide) will travel to the heart through the superior and inferior vena cava
 - Deoxygenated blood travels from the body and will enter the heart through the vena Cava



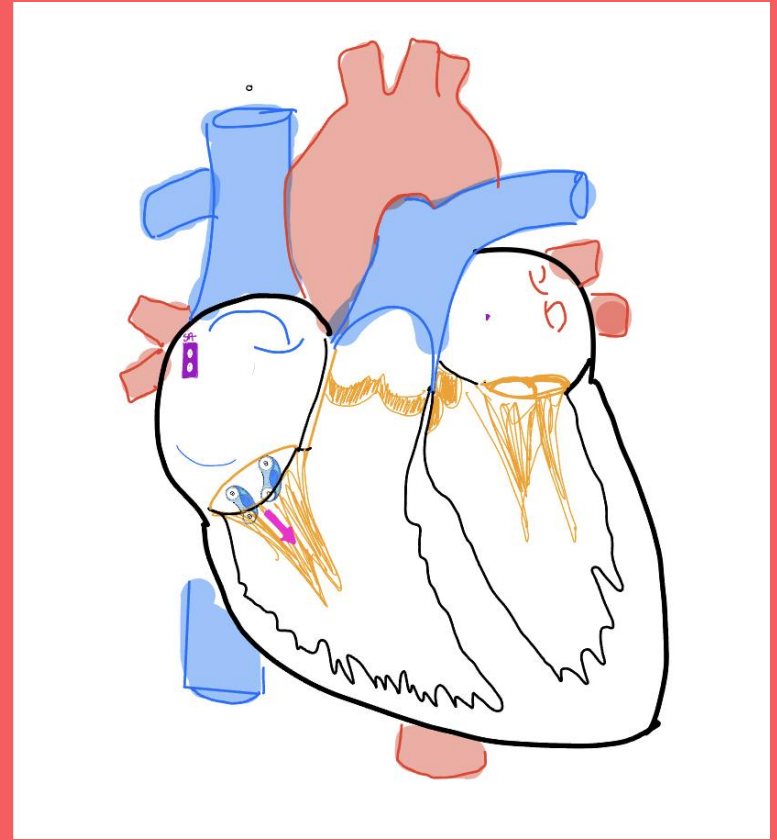
Right Atrium

- ❖ It will continue to make its way into the Right atrium and wait until the Sinoatrial Node (SA) conducts an electrical impulse
 - First chamber where deoxygenated blood enters the heart in this chamber the SA Node is located and will send a signal to the Atrioventricular Node (AV) which will send a signal to the AV Bundle which surrounds both right and left Ventricle



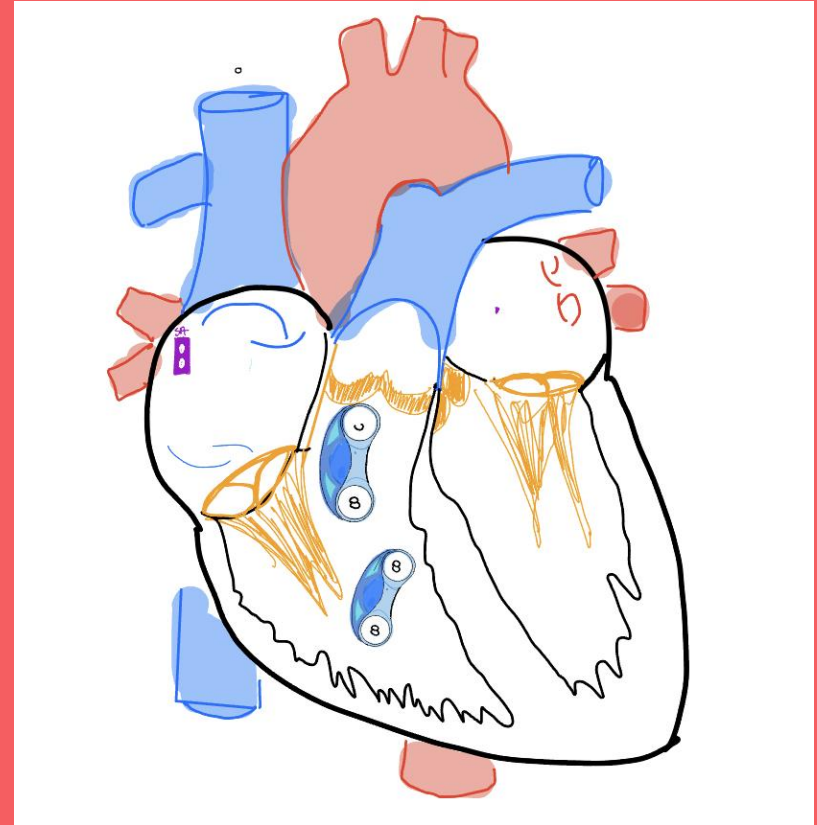
Tricuspid Valve

- ❖ When that signal has been sent it will be enough to push the blue erythrocyte through the Tricuspid Valve
 - 3 Flap Valve that separates blood from flowing backwards from the Right Ventricle
 - Pressure in the Right Atrium will push blood through the valve into the Right Ventricle



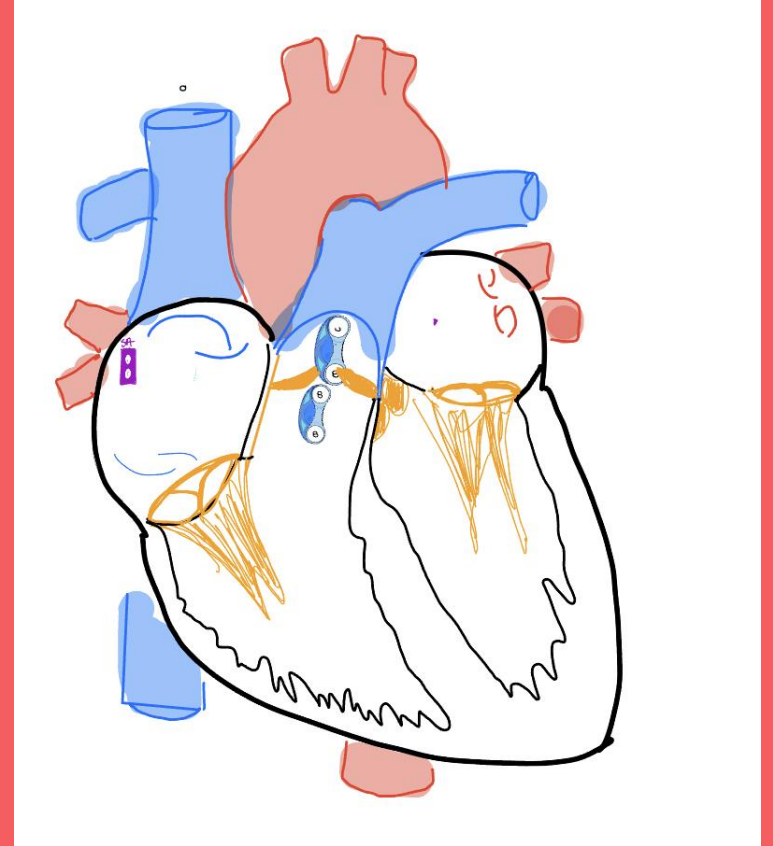
Right Ventricle

- ❖ When the Blue Erythrocytes pass through into the Right Ventricle it has to wait for that electrical impulse in the AV bundle to contract the muscle giving the Blue Erythrocytes enough pressure to pass through the Pulmonary Valve
 - The right ventricle is much thinner since it is only providing enough pressure to pump blood to the lungs which are close to the heart, deoxygenated blood is pushed through the Pulmonary Valve



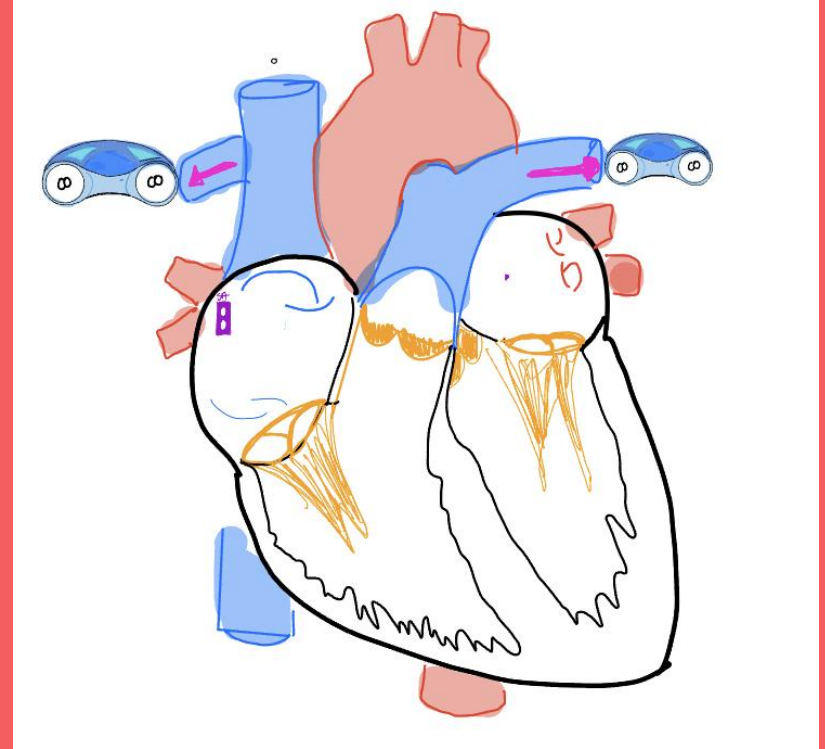
Pulmonary Valve

- ❖ With the increased pressure in the Right ventricle it allows the Blue erythromobile to be pushed through the Valve
 - 3 flaps open with pressure of blood from the Right Ventricle, this will allow deoxygenated blood to travel to the Pulmonary Arteries



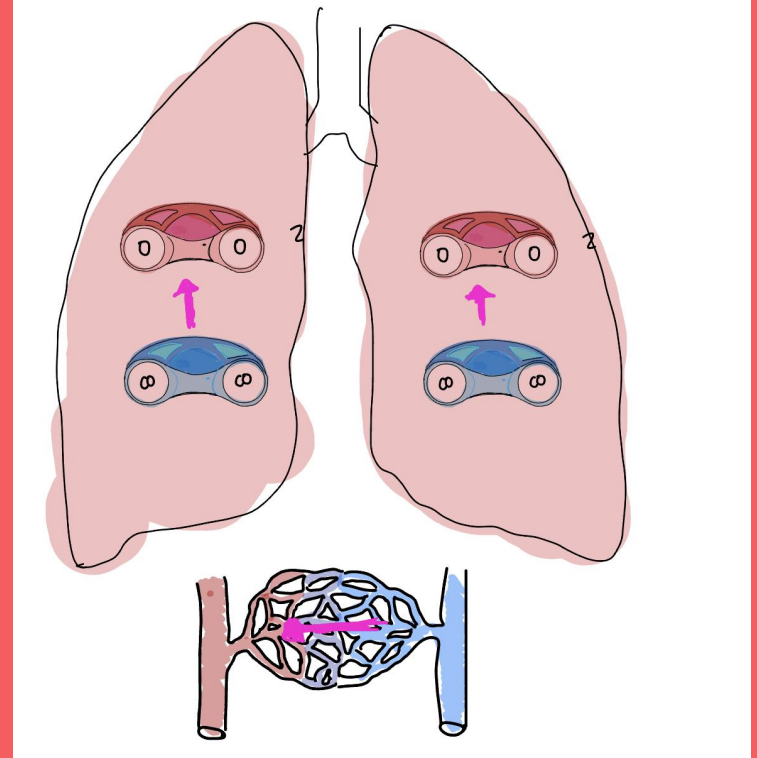
Pulmonary Arteries

- ❖ Blue Erythrocyte will go through the pulmonary arteries to the lungs
 - Pulmonary arteries take deoxygenated blood from the heart to the lung
 - This electrical signal completes one heart beat.



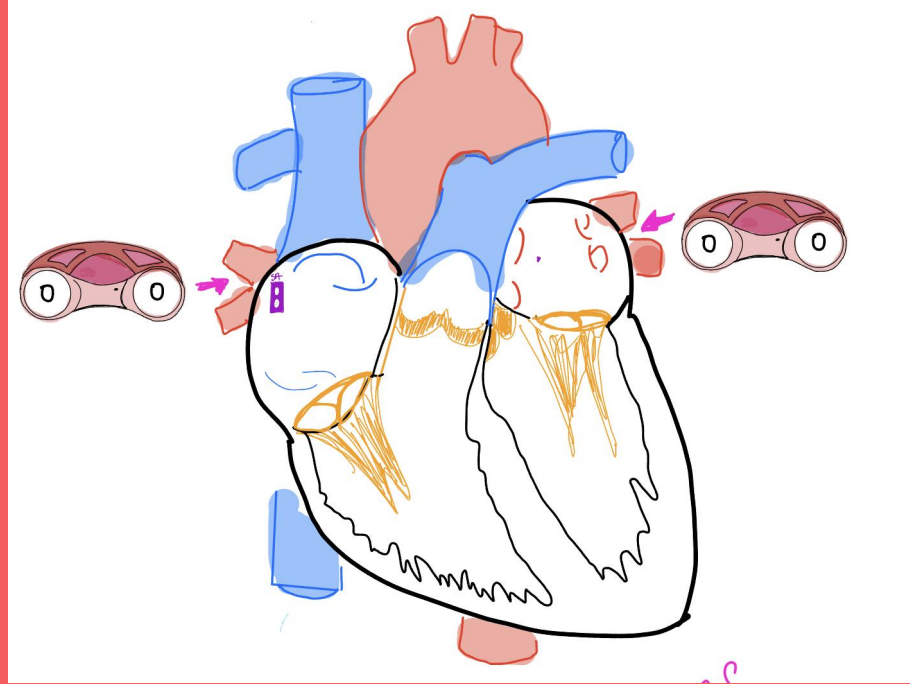
Lungs: Gas Exchange

- ❖ Blue Erythromobile will travel to the lungs and there is a transition to Red Erythromobile
 - Deoxygenated blood will travel to the lungs and in the alveoli is where gas exchange occurs and blood becomes oxygenated and travels back to the heart.



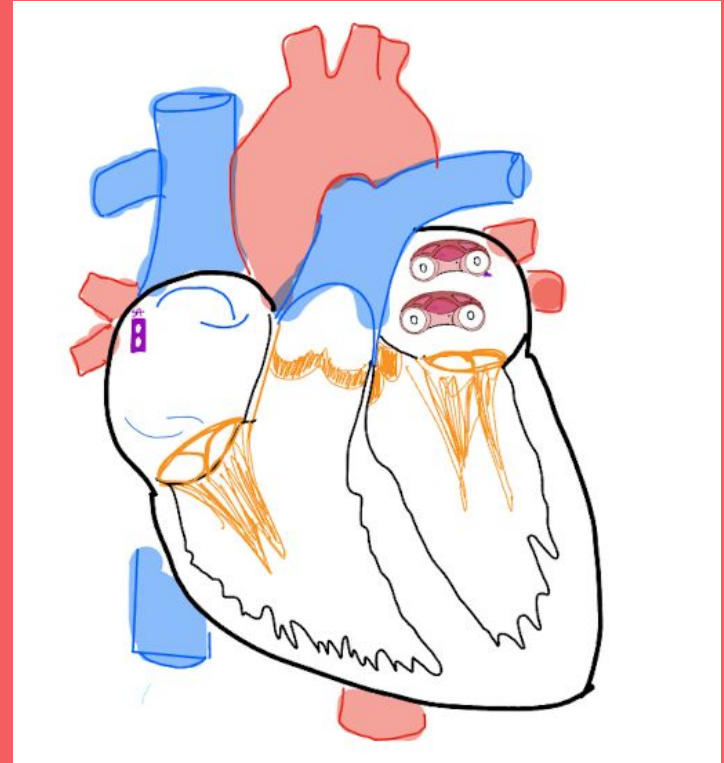
Pulmonary Veins

- ❖ New Red Erythromobile makes its way back to the heart through the Pulmonary Veins
 - There are four pulmonary veins that will make their way directly to the left atrium, bringing oxygenated blood back to the heart



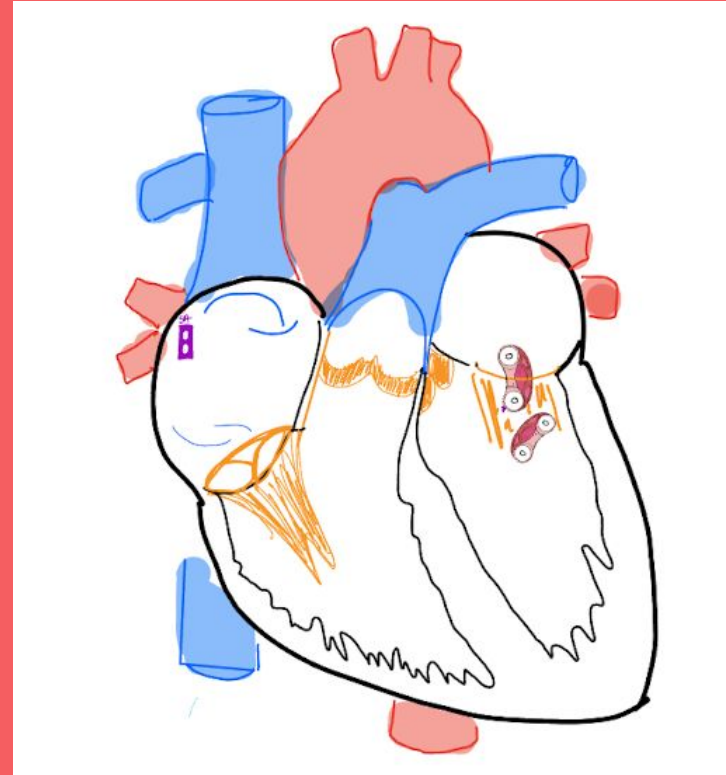
Left Atrium

- ❖ The Red Erythromobile enters the Left Atrium
 - Oxygenated blood enters the left Atrium which was because of the SA node and its electrical passage to the AV node which contracts the heart and pushes the blood through the Mitral Valve



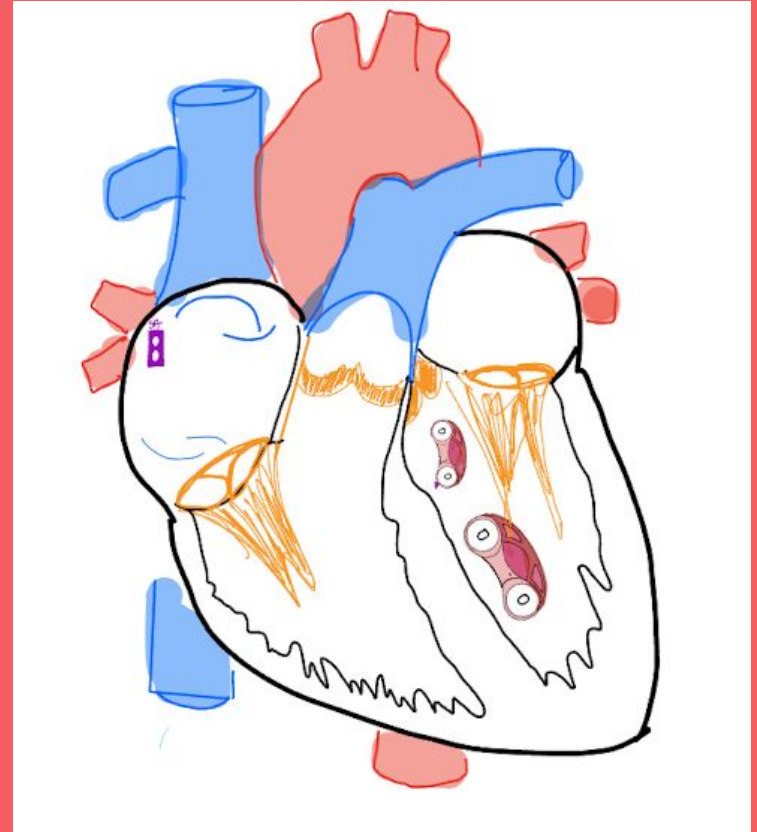
Mitral Valve

- ❖ With the build pressure of the Red Erythromobile then it allowed it to travel to the Mitral Valve
 - Oxygenated blood travel through the 2 flap valve which is opened when enough pressure to push the blood through created from the Electrical signal



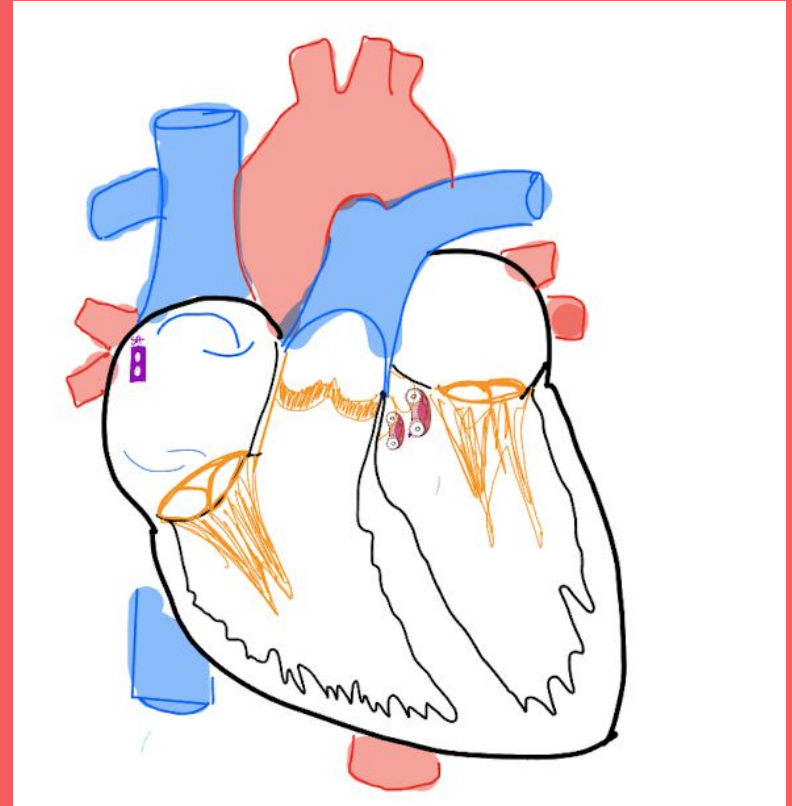
Left Ventricle

- ❖ Red Erythromobile enter the left ventricle which is a much rounder allowing it to travel faster and farther
 - Left ventricle is thicker than the right because when it contracts it needs to be able to push oxygenated blood to the entire body.



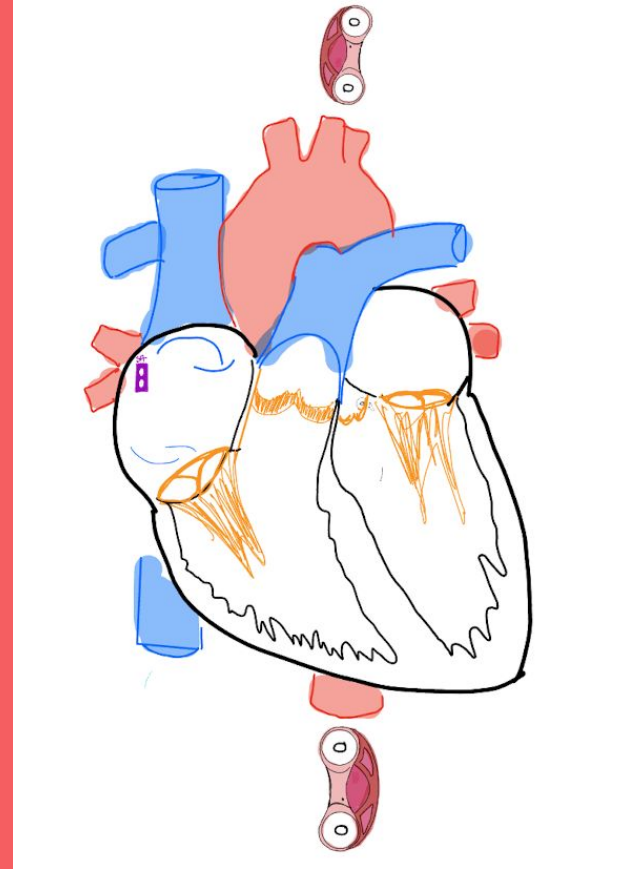
Aortic Valve

- ❖ Red Erythromobile will travel through the Aortic Valve
 - Oxygenated blood that is the left ventricle is pushed through the aortic valve with the pressure that is created by the left ventricle when it contracts



Aorta

- ❖ Red Erythromobile will travel in two directions. The upper body and lower body.
 - When oxygenated is pumped into the Aorta there is enough pressure that it allows it to travel to tissue in the rest of the body



Capillaries: Gas Exchange

- ❖ From the Aorta the Red Erythromobile is sent to the body and at the capillaries
 - Once oxygenated is sent throughout the body there is capillaries in different sections of the body where gas exchange will take place. Tissue release CO₂ and exchanges for O₂ from the blood and sent back to the heart.

