

# CIRCULATORY SYSTEM

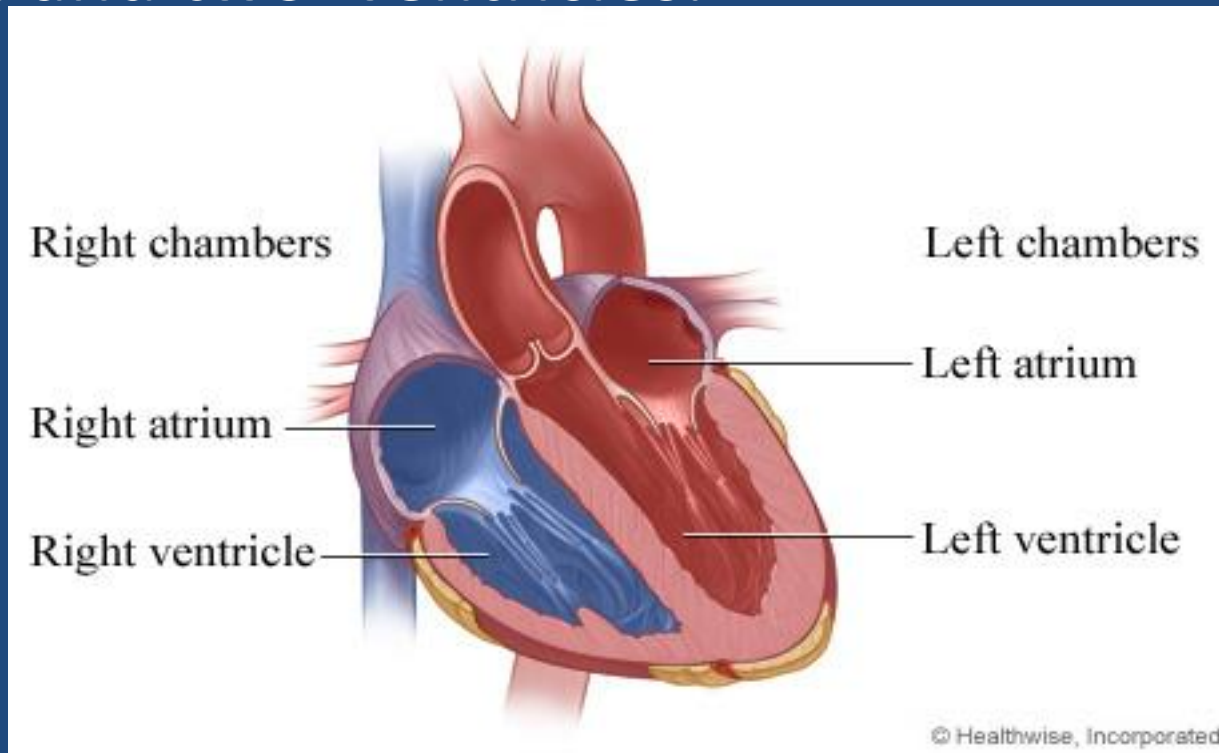


# Anatomy of the Heart

- The human heart is a muscular pump composed of cardiac muscle that allows for continued rhythmic contraction.
- Cardiac muscle is an involuntary muscle, meaning it does not need to be told to contract.
- It is located in the middle of your chest right behind the sternum and just to the left.
- It is the size of your fist.

# Anatomy of the Heart

- There are four chambers in the heart - two atria and two ventricles.



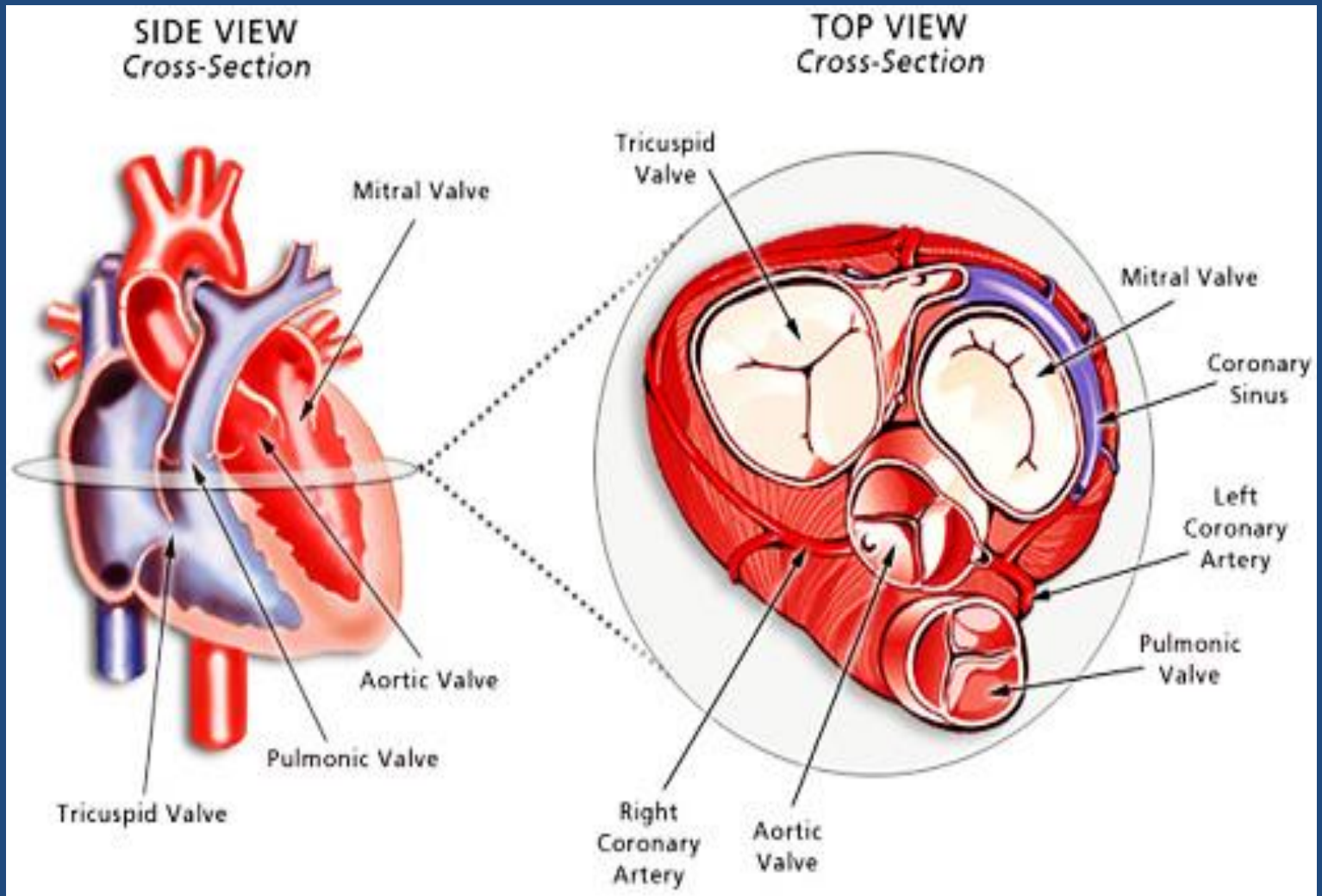
Assignment: Color the heart diagram

# Parts of the Heart

- The atria (one is called an atrium) are responsible for receiving blood from the veins leading to the heart. When they contract, they pump blood into the ventricles
- The ventricles are the real workhorses, they must force the blood away from the heart with sufficient power to push the blood all the way back to the heart.

# Parts of the heart cond....

- Between the atria and the ventricles are valves
- These are overlapping layers of tissue that allow blood to flow only in one direction.



- Assignment: Define each of the valves in the heart.

- The tricuspid valve is between the right atrium and right ventricle.
- The pulmonary or pulmonic valve is between the right ventricle and the pulmonary artery.
- The mitral valve is between the left atrium and left ventricle.
- The aortic valve is between the left ventricle and the aorta.

# What is the Circulatory System ?

- The system of the body responsible for internal transport. Composed of the heart, blood vessels, lymphatic vessels, lymph, and the blood.
- The Circulatory Systems is a combination of vessels and muscle that help and control the flow of blood around the body.
- This is known as **CIRCULATION**.



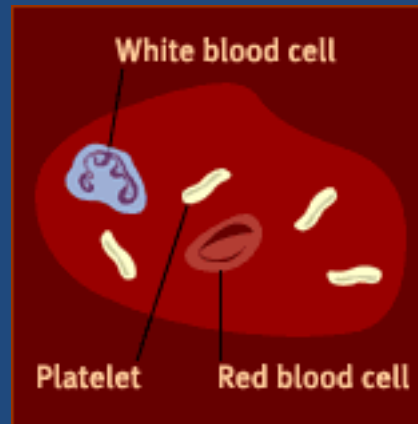
# The Main Parts of the Circulatory System

- The main parts of the Circulatory System include:
- The Heart
- Arteries (within the heart also)
- Veins
- Capillaries

# BLOOD

- What is blood made of?
- Blood is a mixture of cells and a watery liquid, called plasma, that the cells float in.
- Plasma is about 90 percent water.

- There are three kinds of cells in the blood: red blood cells, white blood cells, and platelets. Red blood cells carry oxygen from the lungs throughout the body, white blood cells help fight infection, and platelets help in clotting.





- Red blood cells (also called erythrocytes) are the most numerous, making up 40-45 percent of one's blood, and they give blood its characteristic color. Red blood cells are shaped like tiny doughnuts, with an indentation in the center instead of a hole.



# Questions to answer...

- 1) what do you think happens to your heart when you exercise?
- 2) why is blood needed in the circulatory system?
- 3) How do you think the lungs and heart work together to help the body?
- 4) How many chambers does the heart have?
- 5) what are the parts of the circulatory system?