Be still my beating heart....
You couldn’t survive without it....

Notes on the circulatory system.
Transportation System

• The primary function of the circulatory system is transportation of materials throughout the body.
  ◦ It transports:
    • Oxygen \((O_2)\)
    • Waste – \(CO_2\)
    • Nutrients – Glucose
    • Disease fighting cells – White Blood Cells
MAIN ORGANS
Blood Vessels

- **Veins**
  - Carry blood to heart from lungs to rest of body
  - Oxygenated Blood

- **Arteries**
  - Carry blood to heart from rest of body to lungs.
  - Deoxygenated Blood

- **Capillaries**
Blood Vessels

- **Capillaries**
  - Gas exchange happens here
  - The red blood cells inside the capillary release their oxygen which passes through the wall and into the surrounding tissue.
  - The tissue releases its waste products, like carbon dioxide, which passes through the wall and into the red blood cells.
Heart

- The heart is the main organ in the circulatory system.
- The heart is a two pump organ
- The blood enters the heart twice: once from the body, needing oxygen, and once from the lungs where it becomes oxygenated.
HEART PARTS
There are four chambers in the heart:

1. left atrium
2. right atrium,
3. left ventricle
4. right ventricle.
2 Ways in

5. Pulmonary Vein – brings in oxygenated blood from lungs

6. Superior Vena Cava – brings in deoxygenated blood from the body.
2 ways out

7. Pulmonary Artery—sends deoxygenated blood from the body to the lungs

8. Aorta—sends oxygenated blood from lungs to the body