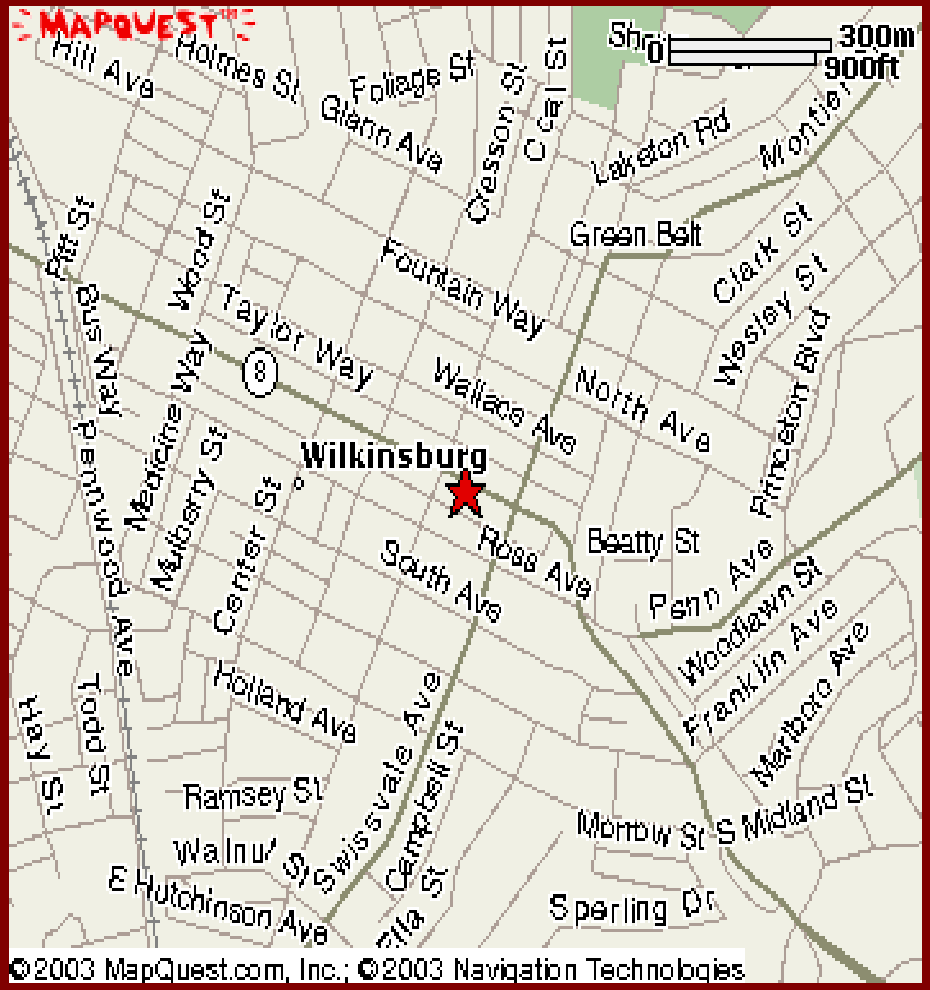
Blood & circulation



Circulation

- Your body resembles a large roadmap, There are routes or “arteries” that take you downtown to the “heart” of the city.



3 Major Parts of the Circulatory system

- Blood Vessels - routes blood travels
- Heart – pumps or pushes blood through body
- Blood – carries important " *stuff " through body

* Stuff – includes oxygen, food, & waste

1 **Blood Vessels** : One Way Streets

- **Blood Vessels** resemble very long and skinny tunnels that are all through your body.





3 Types of Blood Vessels

Arteries

Capillaries

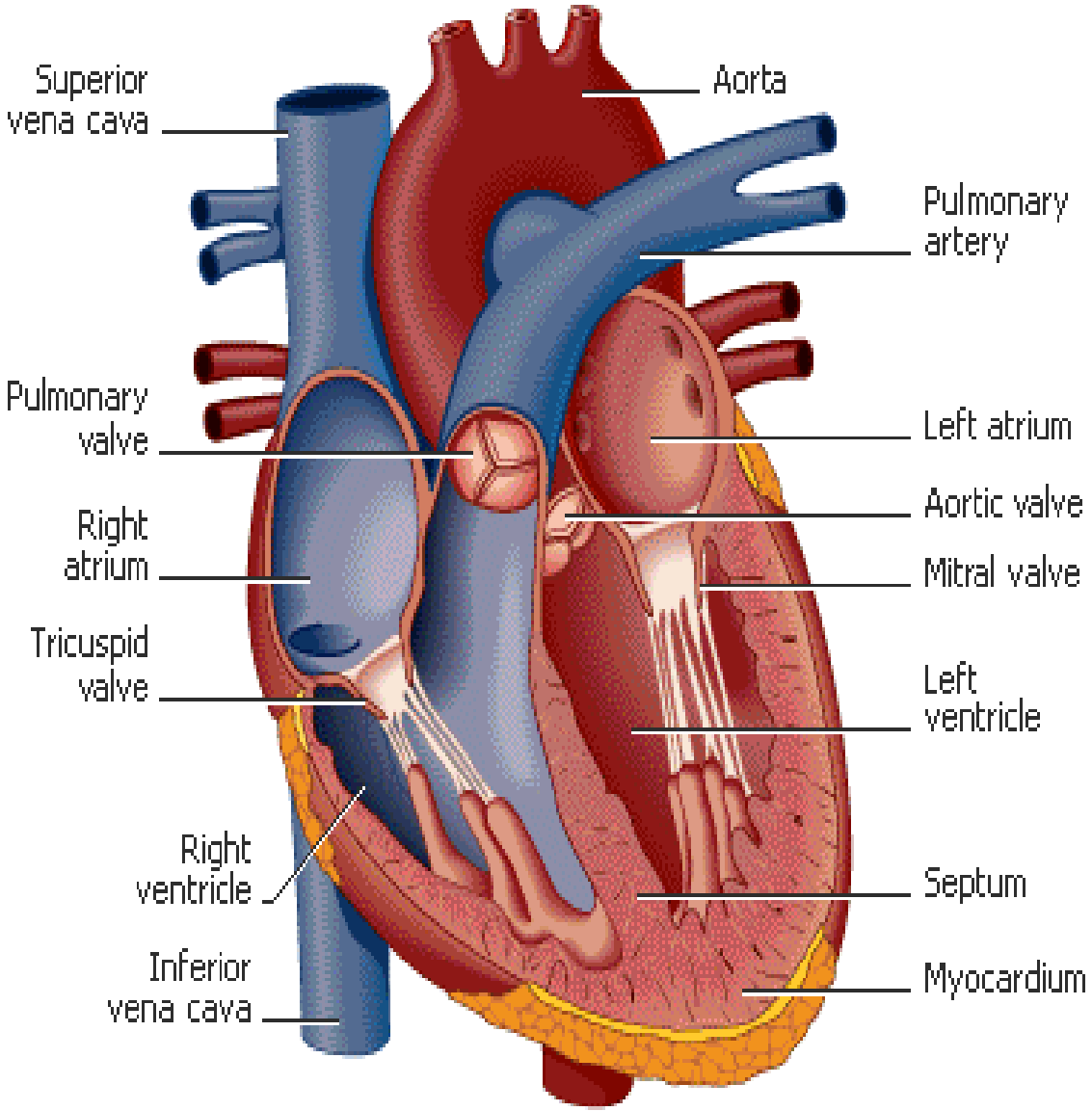
Veins

* Click on each blood vessel to explore its function in circulation

- #2 The Heart

  - 4 chambers (or compartments)
    - 2 upper chambers : Left **Atrium**
      Right **Atrium**

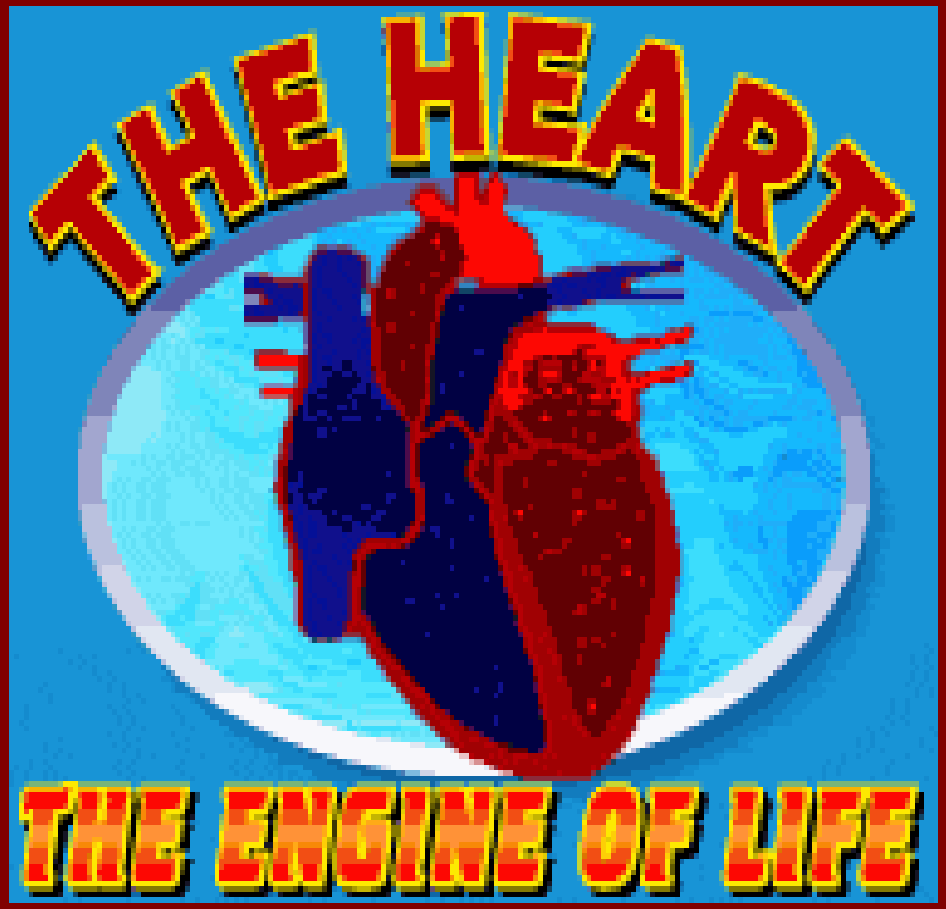
    - 2 lower chambers : Left **Ventricle**
      Right **Ventricle**


Superior vena cava
Aorta
Pulmonary artery
Pulmonary valve
Left atrium
Aortic valve
Right atrium
Mitral valve
Tricuspid valve
Left ventricle
Right ventricle
Septum
Inferior vena cava
Myocardium

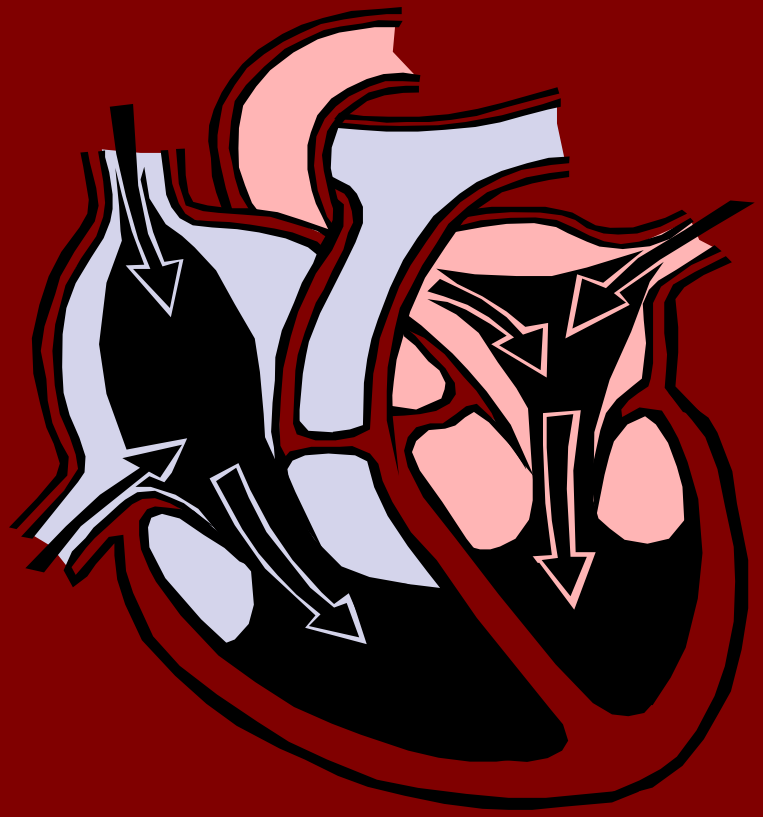
Lub Dub

If you listen to your heartbeat, it makes a lub dub sound.

The **lub** is when blood is pushed out of the heart into the body and the **dub** is the reloading of the heart with more blood ready to push it out to the body



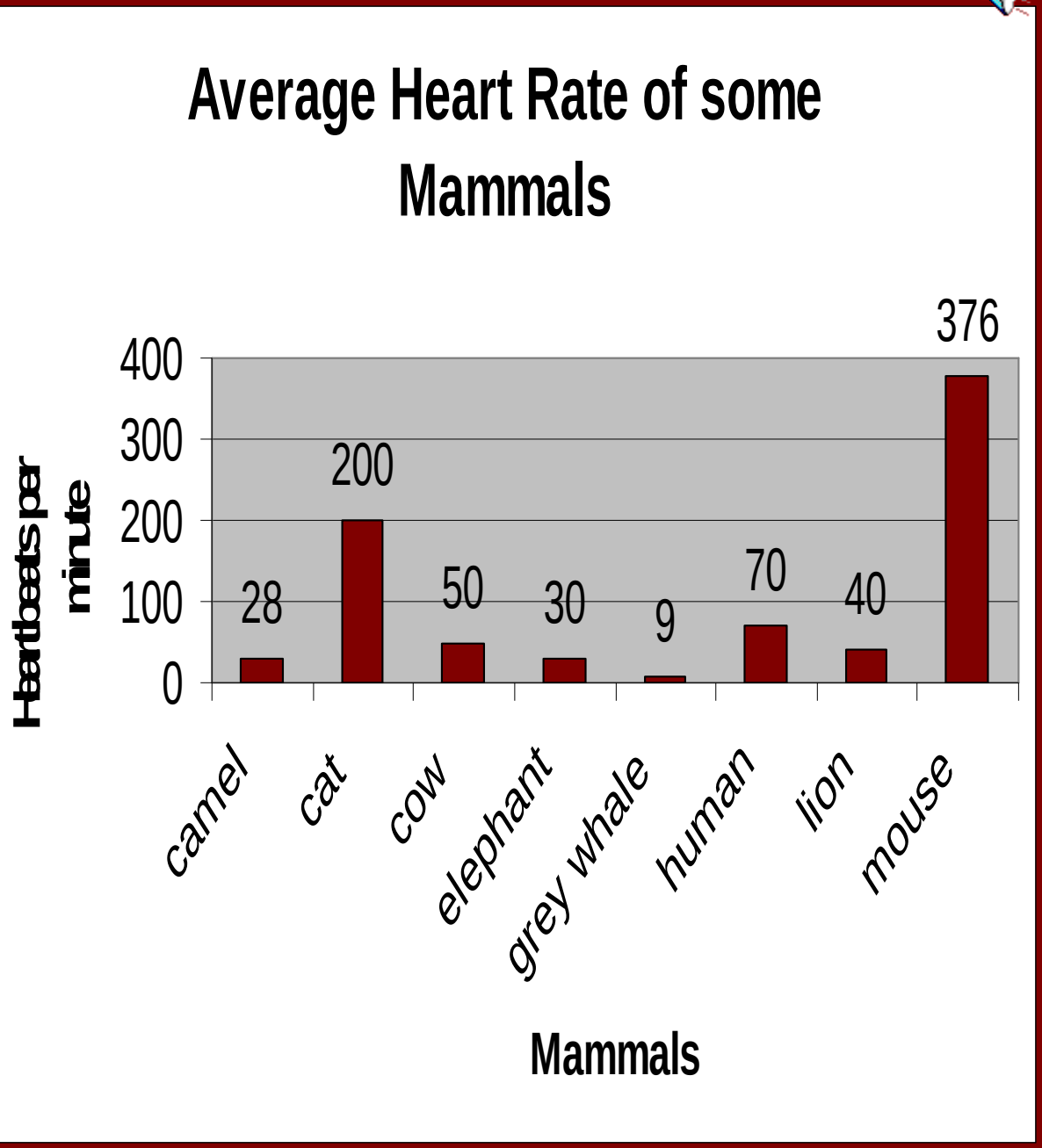
Blood Flow through the Human Body



Blood with little oxygen is pumped from the Right Atrium through a valve to the Right Ventricle and through another valve into the Pulmonary Vein. The Pulmonary Vein sends it to the Lungs to pick up Oxygen. It's sent from the Lungs through Pulmonary Arteries to the Left Atrium through a valve to the Left Ventricle. The Left Ventricle sends it through a valve to the Aorta. The Aorta is a series of branches that sends oxygenated blood throughout the body.

- Heart Rate can be determined using a **Stethoscope**





Heart Facts

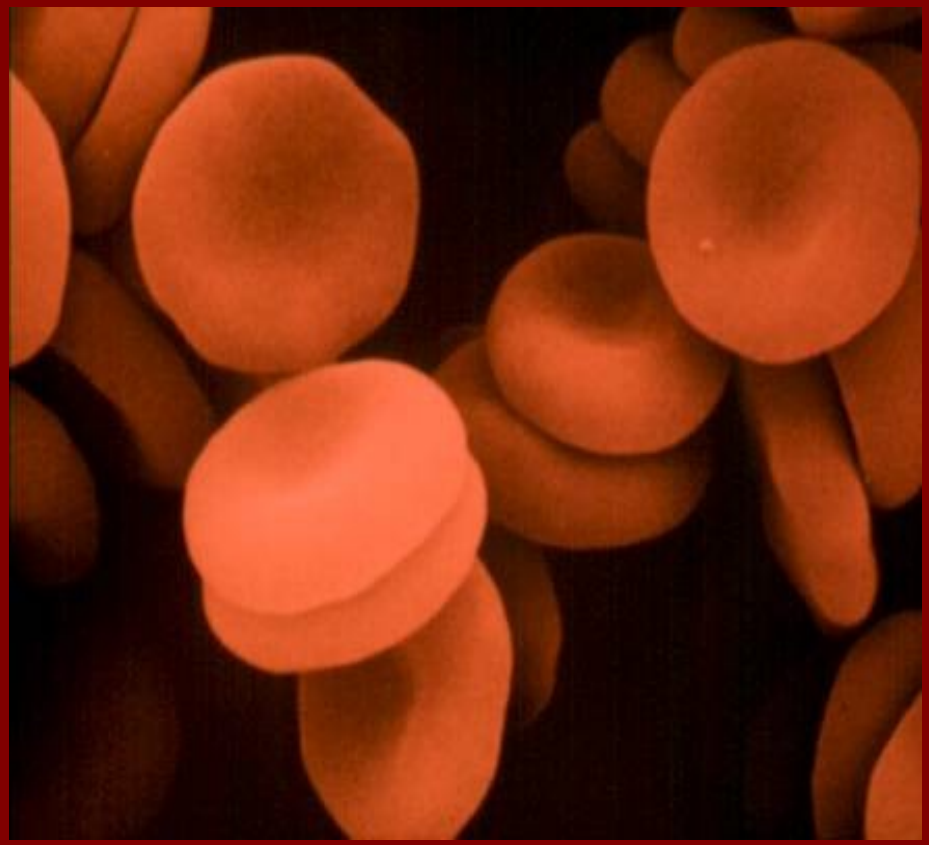
- Hold out your hand and make a fist. If you're a kid, your heart is about the same size as your fist, and if you're an adult, it's about the same size as two fists.

- Your heart beats about 100,000 times in one day and about 35 million times in a year. During an average lifetime, the human heart will beat more than 2.5 billion times.

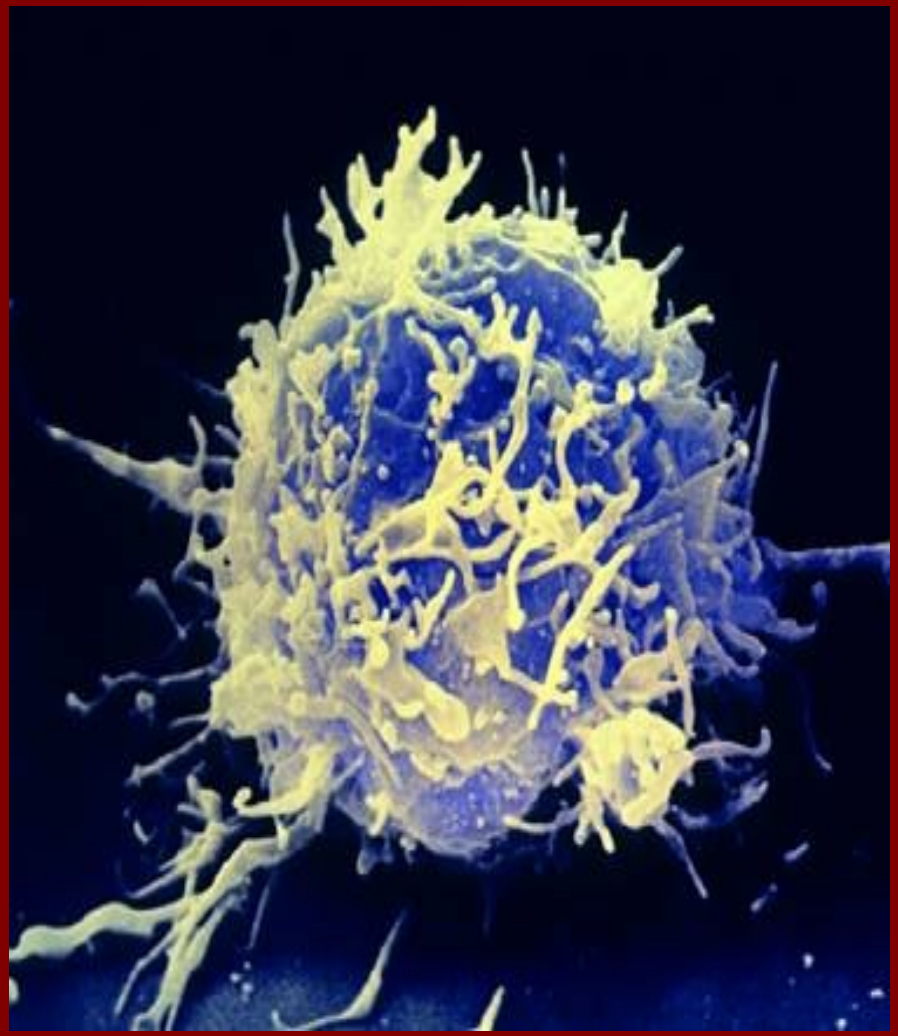
- Give a tennis ball a good, hard squeeze. You're using about the same amount of force your heart uses to pump blood out to the body. Even at rest, the muscles of the heart work hard--twice as hard as the leg muscles of a person sprinting.

Your Blood is made of

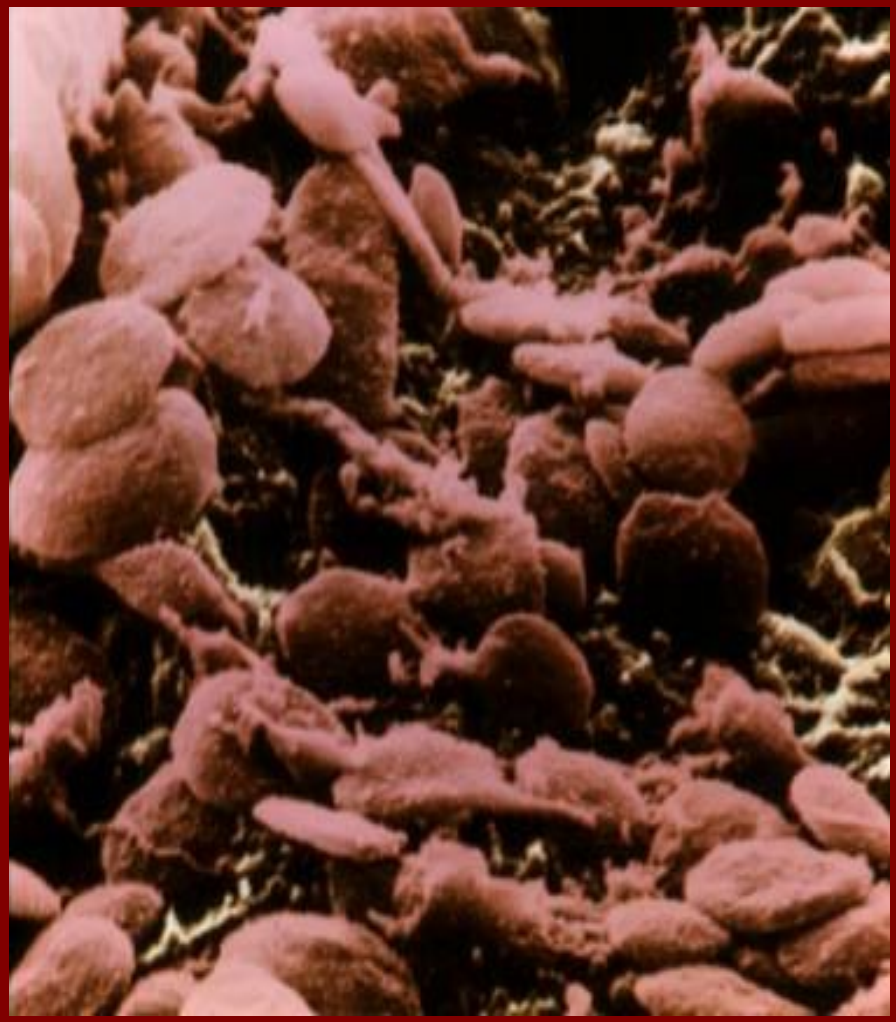
- **Plasma**
  - Liquid part of blood
- **Red Blood Cells**
  - They carry oxygen to all parts of the body



- **<u>White Blood Cells</u>**
  - Fight and kill germs that may enter your bloodstream



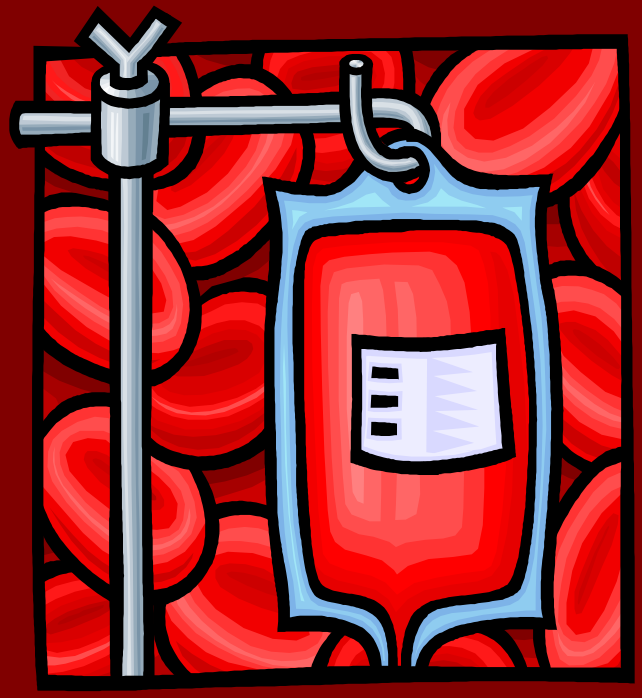
- **<u>Platelets</u>**
  - Form “scabs” when you cut yourself
  - Helps stop the bleeding



Blood Types

There are 4 main Blood Types:

Type A, Type B, Type AB, and Type O



- Dr. Charles Drew * click on link for history of the Blood Bank

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