

Circulation & Blood

The Process of Circulation:

***Name 3 parts of the circulatory system:**

***What are 2 things the blood delivers to the cells?**

***What does blood pick up and remove from the cells?**

***Do all animals have a circulatory system?**

***Does an insect have an open or closed circulatory system?**

***Does an earthworm have an open or closed circulatory system?**

***Does a human have an open or closed circulatory system?**

The Human Heart:

- **You must know the pathway of blood through the human heart.**
 - **4 Chambers (R. Atria, L. Atria, R. Ventricle, L. Ventricle)**
 - **4 Valves (Tricuspid, Bicuspid, Pulmonary Semilunar, Aortic Semilunar)**
 - **Blood Vessels (Pulmonary Artery, Pulmonary Vein, Aorta, Vena Cava)**

***Complete the pathway of blood flow through the heart**

1. Right Atrium

2. _____ **Valve**

3. _____ **Ventricle**

4. _____ **Valve**

5. _____ **Artery**

6. Lungs

7. _____ **Vein**

8. _____ **Atrium**

9. _____ **Valve**

10. _____ **Ventricle**

11. _____ **Valve**

12. _____ **(Largest artery in the body)**

13. Body

14. _____ **(Largest vein in the body)**

15. Right Atriums (Starts Over)

***What is your heart rate?**

***What causes the first sound, (LUB)?**

***What causes the second sound, (DUP)?**

- **Normal hearts sound – LUB -- DUP**

***What is happening if there is a “Lub-Swish-Dup”?**

***What valves are faulty with a “Lub-Dup-Swish”?**

***Which side of the heart is high in oxygen?**

***Which side of the heart is low in oxygen?**

Blood Vessels:

- **The 3 types of blood vessels in your body are...**
 - **Arteries – Carry blood away from the heart**
 - **Veins – Carry blood toward the heart**
 - **Capillaries – Exchange of oxygen, carbon dioxide & nutrients**

***Arteries: List 3 traits of arteries**

- 1.
- 2.
- 3.

***Veins: List 4 traits of veins**

- 1.
- 2.
- 3.
- 4.

***Capillaries: List 2 jobs of capillaries**

- 1.
- 2.

Problems of the Circulatory System:

- **Blood Pressure is a measure of the pressure on the arteries when the heart is contracting and when the heart is relaxing. That is why there are two numbers associated with blood pressure. (120/80)**
 - **The 120 represents the pressure on the artery when the heart contracting.**
 - **The 80 represents the pressure on the artery when the heart is relaxing.**

- **Blood pressure is taken at an artery (“brachial artery”)**
- **High Blood Pressure (Hypertension) – When a person’s blood pressure is too high it can lead to problems throughout the body. Many times there is no warning of high blood pressure.**

***What 3 risks associated with high blood pressure?**

***What are 3 ways to possibly reduce high blood pressure?**

- **Heart Attack – When heart muscle tissue is damaged because not enough oxygen is transported to the heart muscle.**

***What are 3 risk factors that may increase a person’s chance of a heart attack?**

BLOOD:

Functions:

- **Transport - oxygen, carbon dioxide, nutrients and wastes**
- **Fight infections & disease**
- **Clot the blood**
- **Release body heat**

Components of Blood:

- **Red Blood Cells**
- **White Blood Cells**
- **Platelets**
- **Plasma**

***Match the “components of blood” from the list above to the correct functions.**

***Clot the Blood –**

***Fight Infection –**

***Carry Oxygen –**

***Carry Nutrients & other waste products -**