

Blood is the Vehicle

Put your fingers on your neck, right to the side of your throat. Can you feel your heart beat? Have you ever wondered what is happening inside you when you can feel your heart beat? Have you ever wondered why the blood you can see in your wrists looks blue? Have you ever wondered just how blood gets to all the parts of your body? Well my friend, today is your lucky day! Today you can learn about blood, the vehicle that carries food, oxygen, and water to all the cells of your body.

Blood is part of the circulatory system. It is called the circulatory system because the organs of this system carry blood in a circle. Blood starts and ends this circular journey in the heart. Actually there are two separate circles that blood makes. The first is the pulmonary circulation that carries blood from the heart to the lungs where oxygen is added to the blood. This oxygen rich blood is then returned to the heart where it begins the second circle called the systemic circulation.

Systemic circulation is the delivery system that touches each cell of our bodies. This system consists of the heart, arteries, capillaries, and veins, each with a very important function in the success of the systemic circulation system. The heart pumps oxygen rich blood into the arteries. Arteries always carry blood away from the heart. These arteries are the large blood vessels. As the blood flows around our bodies, the blood passes through the arteries. The arteries branch into smaller and smaller arteries, finally branching into capillaries. The oxygen rich blood enters the capillaries. Capillaries are the tiniest blood vessels. It is from these capillaries that oxygen enters the millions of body cells, and carbon dioxide is taken from the cells. The blood flowing from the cells moves from these tiny capillaries into veins for the journey back to the heart. The veins always carry blood to the heart. On average, a single blood cell takes about thirty seconds to complete a full circle through both the pulmonary and systemic circulation.

Blood is not just a red liquid that flows through our bodies. Blood is made up of three types of cells. Red blood cells carry oxygen. White blood cells are disease fighters. Platelets are blood cells that clot the blood and stop the bleeding. All of these blood cells are carried through blood vessels in liquid called plasma. Plasma is yellowish and contains water, salts, food (proteins, vitamins, minerals), chemicals (hormones), some gases (carbon dioxide), and fats (cholesterol). The red blood cells give our blood the red color. When blood is very rich in oxygen, it appears dark red, almost purple. When we look at this purple, oxygen rich blood through our yellowish skin, it appears blue.

The heart is a hollow muscular organ that pumps blood to the arteries and receives blood from the veins. The pressure created by the pumping action of the heart pushes the blood to the arteries. The blood in the pulmonary circulation is pumped to the lungs. The blood in the systemic circulation is pumped to all cells of the body, but it is not the pumping of the heart that makes the heart beat sound. As the heart pumps, valves open to allow the blood to flow, then close to prevent blood from flowing backwards. As these valves open and close, they make a sound we call the heartbeat.

Blood carries what our cells need to stay healthy. As you feel your heartbeat, you know that blood is traveling throughout your body. Blood is the vehicle that keeps us alive.

Name _____

Date _____

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After reading the article, write the correct answer to each of these questions.

1. What is the main idea in this article?

2. What does the article mean when it states that blood is the vehicle?

3. Our blood is never blue. Why does it look blue in our wrists?

4. What would happen if we had no platelets in our blood?

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Teacher Key

After reading the article, write the correct answer to each of these questions.

1. What is the main idea in this article?

Learn about blood, the vehicle that carries food, oxygen, and water to all the cells of your body. (Main idea)

2. What does the article mean when it states that blood is the vehicle?

A vehicle moves things, so blood must move things in my body.

(Implicit)

3. Our blood is never blue. Why does it look blue in our wrists?

When blood is very rich in oxygen, it appears dark red, almost purple. When we look at this purple, oxygen rich blood through our yellowish skin, it appears blue. (Explicit)

4. What would happen if we had no platelets in our blood?

Our blood would not clot and we would just keep bleeding. (Implicit)

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Sample Outline

1. Systems

- A. Circulatory – the entire system
- B. Pulmonary – to and from lungs
- C. Systemic – to and from all cells except lungs

2. Parts

A. Blood vessels

- 1. Arteries
- 2. Veins
- 3. Capillaries

B. Blood

- 1. Red blood cells
- 2. White blood cells
- 3. Platelets
- 4. Plasma

C. Heart

- 1. Muscle
- 2. Valves