

Lesson 2: Signs and Works of Allah

In The Name Of Allah, the Most Gracious, the Most Merciful

That morning when I arrived at school, the other children gathered around me; they must have already heard about what happened last night. When the bell rang we went to our seats and when the teacher entered the room we all rose. I wiped my eyes as I got up but my face and eyes were still moist with tears.

My classmates told the teacher what they knew about the accident.

"When they took Ahmad's brother to the hospital his face and hands were a dark color, and they asked, 'Why was Ahmad's brother's hands and face so dark? What causes suffocation, (asphyxiation)? Why did he suffocate? What will happen to him?'"

Our teacher said, "Dearest students! If you would like to learn the answers to these questions, we will begin our studies on the circulatory and respiratory systems, right away. We will begin our lesson in science tomorrow. Who can bring the heart and lungs of a sheep to school tomorrow?"

Two students raised their hands and promised to bring the heart and lungs of a sheep to school.

The next day they brought them to class. Our teacher cut them apart with a knife and showed the students the different parts of the heart and lungs and explained their functions. All the students learned about the function of the heart and lungs and learned the answers to their questions. Afterwards, the teacher outlined what we had learned and posted it on the bulletin board for all to see.

The Circulatory System

From this lesson, we became familiar with some of the body's mysteries, and learned about the harmonious functions of the body's organs. From observing the signs and works of the power of Allah, we learned more about Him.

You all know that blood is constantly circulating through our veins, but do you know why it circulates?

Blood, like a stream of water, flows alongside every cell in our body and provides food and oxygen to them.

One of the most important functions of blood is to transport oxygen to every cell in the body. If at any time oxygen does not reach our body cells we will die. The temperature and energy of the body is dependent on oxygen. The red blood cells which are present in our blood, flow through the body and provide oxygen to the body cells. Do you know how the blood is circulated? A powerful pump performs this job. This mighty pump regularly contracts, pumping the blood throughout the body. Do you know what this powerful pump is called? Red blood cells carrying oxygen, with every contraction of the heart, are pumped into the largest artery in the body. From this, arteries divide and re-divide like the branches of a tree until, finally, the tubes become microscopically thin blood vessels. The smallest branches are called capillaries. The capillaries are so thin, in fact, that ten of them placed side by side are no wider than a hair. No cell in your body is very far from a capillary and red blood cells fresh and full of oxygen, carry oxygen to the cells and take carbon dioxide—a poisonous gas—away. When the red blood cells give off their oxygen and receive the carbon dioxide from the body cells, they become a dark maroon color. If they remain in this condition they die, and our death soon follows.

Blood cells require oxygen so they can become red and fresh and begin their cycle again. From where do they receive oxygen? How can they begin their work over again?

They must return to the heart. They need other blood vessels with which to return to the heart.

Our Magnificent Creator, knew of this need, and created veins in our body specifically for the purpose of carrying these deoxygenated (lacking oxygen) blood cells back to the heart. The amazing thing about these veins is that they have small valves which propel the blood towards the heart and prevent it from flowing back. The heart pulls this darkened blood which has been deoxygenated through the veins towards itself.

Soon the dark blood cells reach the heart but there is no oxygen in the heart. The blood cells are near death, if they die we will soon die also. They need oxygen. They want to reach fresh air so that they can use the oxygen in it.

Our All-Knowing Creator, created a passage way from the heart to the lungs, so that the cells in this way reach fresh air and utilize the oxygen which is in the lungs.

With a contraction, the heart pumps the tired (de-oxygenated) blood to the lungs. There, your blood cells reach the fresh air inside the lungs, take in oxygen and give off carbon dioxide.

The respiratory and circulatory systems are coordinated and synchronized with each other and were created for the same purpose. Could it be possible that these exact and orderly systems have come into

existence at random without any purpose? Could an unintelligent being create such accurate and purposeful systems? From observing the precision of the circulatory and respiratory systems and their methodical coordination, we discover the Greatness and Power of our Creator and become more familiar with His limitless bounties, and thus, better known, worship and praise Him, and keep worshipping other than Him.

Think And Answer

1. What is the function of the circulation of blood?
2. What do the red blood cells do in our body?
3. How is the blood circulated throughout the body?
4. How do the red blood cells which have become dark (deoxygenated) return to the heart?
5. Where do the blood cells receive oxygen?
6. If oxygen doesn't reach the blood cells, what will happen?
7. If the red blood cells didn't have a way to return to the heart, what would happen? How do the blood cells travel back to the heart?
8. How does oxygen get into the lungs?
9. If we didn't have lungs or the respiratory system what would happen? Where would the blood cells receive oxygen?
10. If there wasn't any oxygen in the air what would happen? Where would the blood cells find oxygen? How would they live?
11. How does suffocation occur? How long can we go without breathing?
12. What did you learn about the synchronized coordination of the body's systems?

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