Circulation Game

Supplies:
2 different colors of balloons
2 small laundry basket and 1 large laundry basket*
Optional: 4 different colored bandanas, tags, or other ways to designate players
Stopwatch or clock with a second hand. (or display http://www.online-stopwatch.com)

Preparation:
Have students blow up a bunch (say 20 of each, they can be the very small kind) blue *(or purple or grey)* balloons and the same number of red *(or pink or white)* balloons. Put all the blue in the large laundry basket.* Put all the red into one of the small baskets. These will represent the carbon dioxide gas and oxygen gas that we breathe in and out. One small basket is left empty for now. (*You can use 2 small baskets for the carbon dioxide instead of one large if desired.)

Optional: choose a way to designate the players: Heart, the Lungs, Red Blood Cells (RBCs) and Body. Bandanas, scarves, or hats of different colors (red for heart, pink for lungs, polka dots for RBC, brown for body, etc.) use stickers, nametags, or choose students by shirt color.

Script:
In this session we are going to talk a lot about Blood! Who here has ever seen some of your own blood? *(Let them vamp on various gross injuries.)*

Well that's exactly right; when we get hurt sometimes our blood comes out of our bodies. So we have blood inside our bodies. Let's talk about where that blood is inside of us, do you have blood inside your nose? Inside your knees? (etc.) Yes! Blood travels inside and around through every single part of our bodies! Our blood has to move around/travel because our blood is picking up and dropping of many different things. Can anyone guess what some of those things might be? *(Solicit "Food, Oxygen and Carbon Dioxide.")*

Well right now I would like to show you exactly how our blood picks up that oxygen and carbon dioxide. To do that I am going to need two helpers to be Red Blood Cells. *(2 students come up and put on red blood cell designation.)* Now Red Blood Cell, what is your job again? To carry around what? *(Solicit "Oxygen.")* Exactly. And, also? *(Solicit "Carbon Dioxide.")* Yup! Well… where in our bodies do you think those Red Blood Cells have to go to pick up oxygen? *(Solicit "Lungs.")* Yup! So I am going to need some lungs. *(Get two more students and put the lung designation on each of them.)* Well lungs are the part of our bodies that breathe in air and oxygen. It's the place where our RBCs go to pick up that oxygen so here *(hands one lung the full basket of red balloons – this represents the oxygen)*. You've got lots of oxygen, Lungs.

Okay now there is also another really important part of our bodies that we can't forget about in this circulatory system. It's the part of our bodies that pump around the blood so it can travel throughout the body. Do you know what part I am talking about? It goes lub-dub, lub-dub. The heart! Exactly. So I need one person to be the heart *(have student come up and stand in the middle with the heart designation).*

Our heart's job is to pump around our blood. Okay now that we have the important parts ready, this is what you are going to do. I need someone to represent the body. *(Student comes up and gets body designation. Give him/her basket of blue balloons.) *(If you don't have a big enough basket, you may also use two people with two small baskets, one full of blue balloons and one empty, to mirror the lungs.)*

Take a look at this body here. It has all these blue balloons. The blue balloons represent carbon dioxide, the stuff we exhale, or breathe out. It will be the Red Blood Cell's job to remove those balloons from the body and bring them back to the lungs so they can exhale them. Red Blood Cells, you will need to take that carbon dioxide to the lungs *(hands an empty bucket to the other lung*). While you are at the lungs you will drop off the carbondioxide here, and pick up some oxygenated blood *(demonstrate from the full basket of red balloons)* to bring back to the body.

Why would it be important for our bodies to have oxygen***?*** *(Discuss: oxygen is a fuel for our bodies just as important as food and water and it's our blood's job to bring that oxygen all over the entire body.)*

So, Red Blood Cells, can you get from the body to the lungs and back again all by yourselves? *(No!)* How will you get there? *(Solicit "Heart" from the RBCs or the class.)* You are going to start here at the heart and **high-five the heart** to show that you have been pumped through. Then you will go over to the body and pick up deoxygenated blood containing carbon dioxide from the body….and then go where? Ah! **Not** right to the lungs you have to make a stop at the heart so **it** can pump you to the lungs.

High-five the heart again so it can send you to the lungs. Once you get to the lungs you will drop off the blue balloons and take some red ones, head back to the heart *(demonstrate high five)* who pumps you to the body. Back at the body you drop off the red balloons and pick up more blue balloons and head back to the lungs through the….(solicit "Heart!") that's right! It's just one big circle that happens over and over! So let's see how much blood can be oxygenated in just one minute.

Optional: choose a student to keep the time. Other students can cheer on the race!

Everyone know what they're doing? OK, on your mark, get set, go!

