

before I have done my lectures. You would not think there was anything wonderful in this bottle; it has neither taste colour, nor smell; but it is the gas in this bottle which makes our bodies warm and keeps us alive. Directly we can't have any of it we die; and then you know our bodies become quite cold, like a piece of marble. At the end of my lecture I will put this match, with just a tiny spark of light at the end of it, into this bottle; then it will burst into a bright flame.

I must now explain the wonderful effect oxygen gas has on our blood. You all know you have a heart, but I dare say you don't know what it is like, nor where it is placed in your bodies. I am glad to tell you I can show you a beautiful model of a heart; here it is. It is placed nearly in the middle of the chest, between the two lungs, as you will see by this picture. This wonderful little heart can send the blood to every part of our body, from the top of our head to the ends of our toes, in less than one minute. The blood is carried in thousands and thousands of little tubes, or pipes, to every part of the body. You know that if you prick yourself in any part with a needle, blood comes out. Directly we take in a breath of fresh air, the oxygen that is in it turns the blood into a beautiful bright red. I have written down oxygen gas here in red letters, because it makes the blood such a beautiful red colour. Look how it is spelt.

I will now tell you about the air which comes out of our mouths. It is as deadly as any poison you could buy at a druggist's shop. On a cold day you can see the breath coming out of your mouths, and it looks like steam. Breathe on a pane of glass, and you will see directly a white film. If you were to sit in a room that had no windows, and the door was shut fast, so that no fresh air could come in, you would soon die. The name of the poisonous gas that comes out from our mouths is carbonic acid; it is written down here in black letters, because it turns all our blood dark and thick, and this dark blood poisons the brain, spinal cord, nerves, and heart, and so we die. I have got some here in this bottle, and I will show you at the end of the lecture how heavy this gas is. Like air, it cannot be seen, but I can pour some of