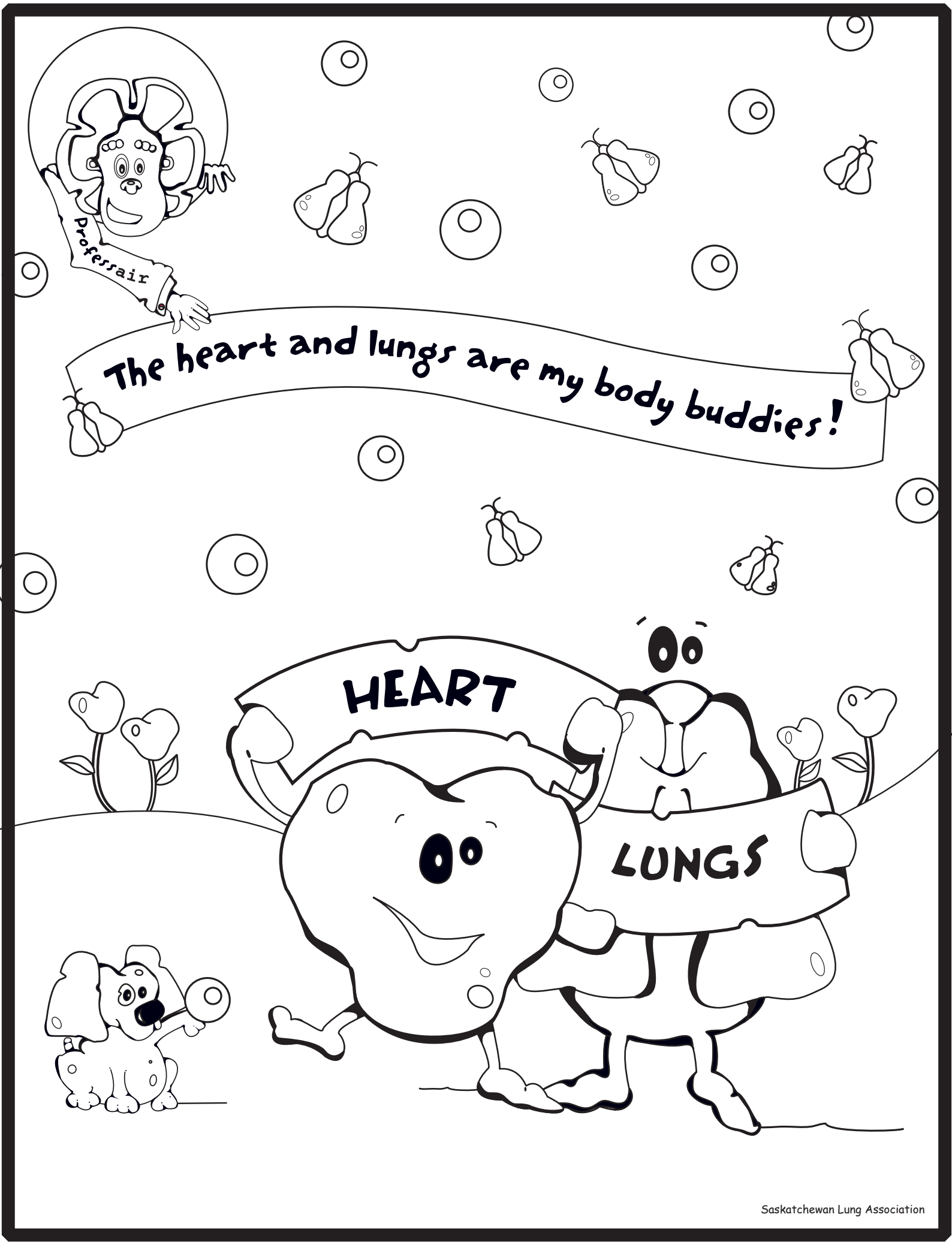
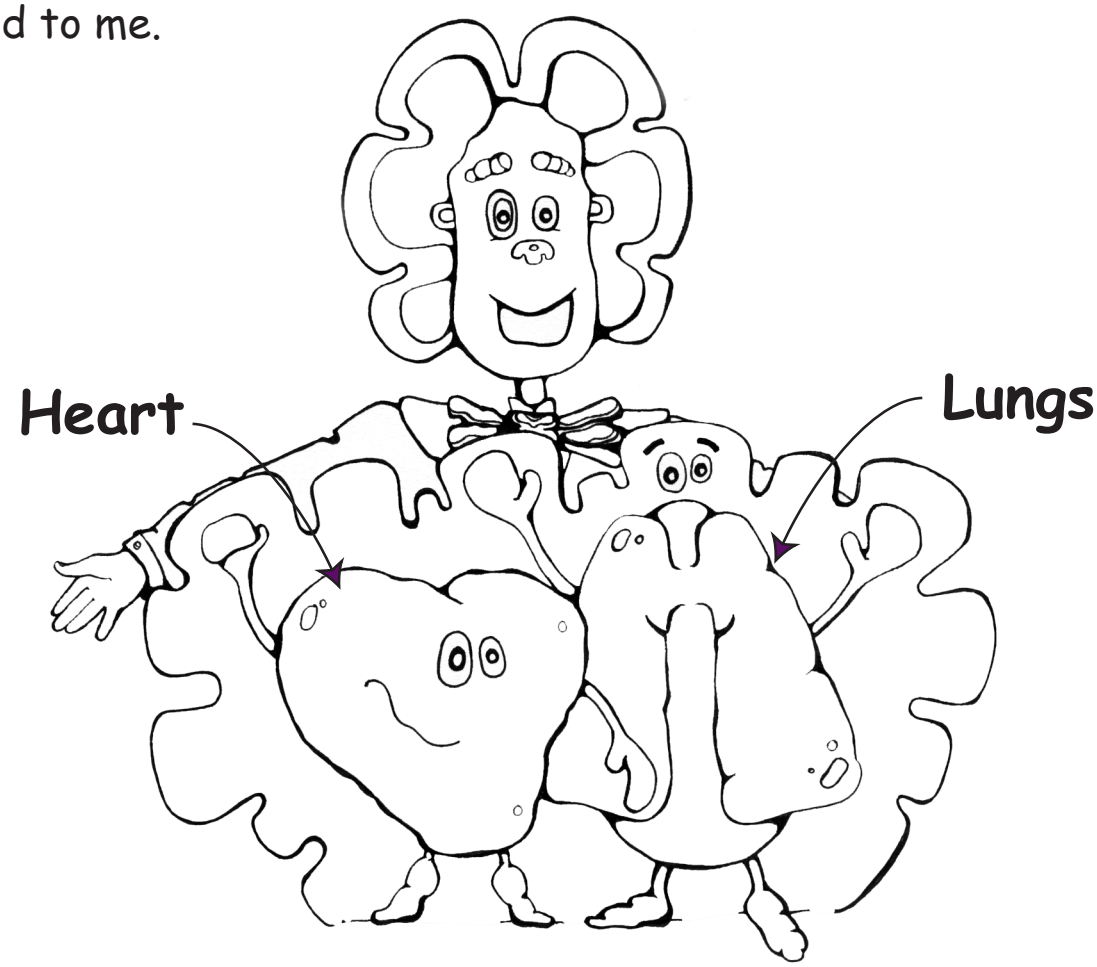


Hi!

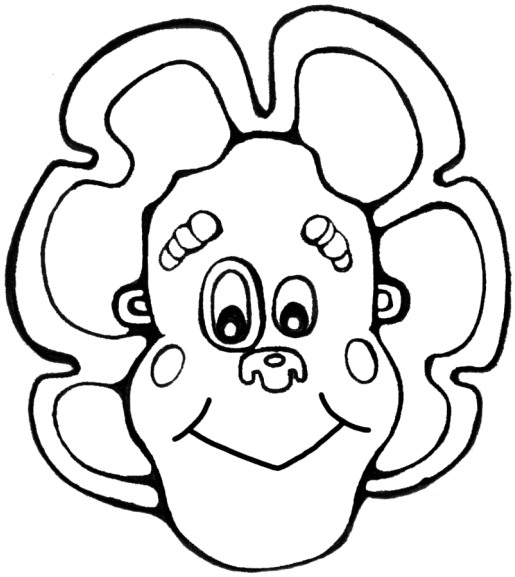
I'm the ProfessAIR. I want to introduce you to two of my best friends, my **HEART** and **LUNGS**. They have been working together, for me, for many, many, many years now. I try to take very good care of these **body buddies** because they have been so good to me.



Please come along with me as I take you on a trip into my body where we can all learn what makes my **heart** and **lungs** my best friends!

Take a big breath. Hold it in. Where did the air go? Why do we need it? There are so many questions to answer.

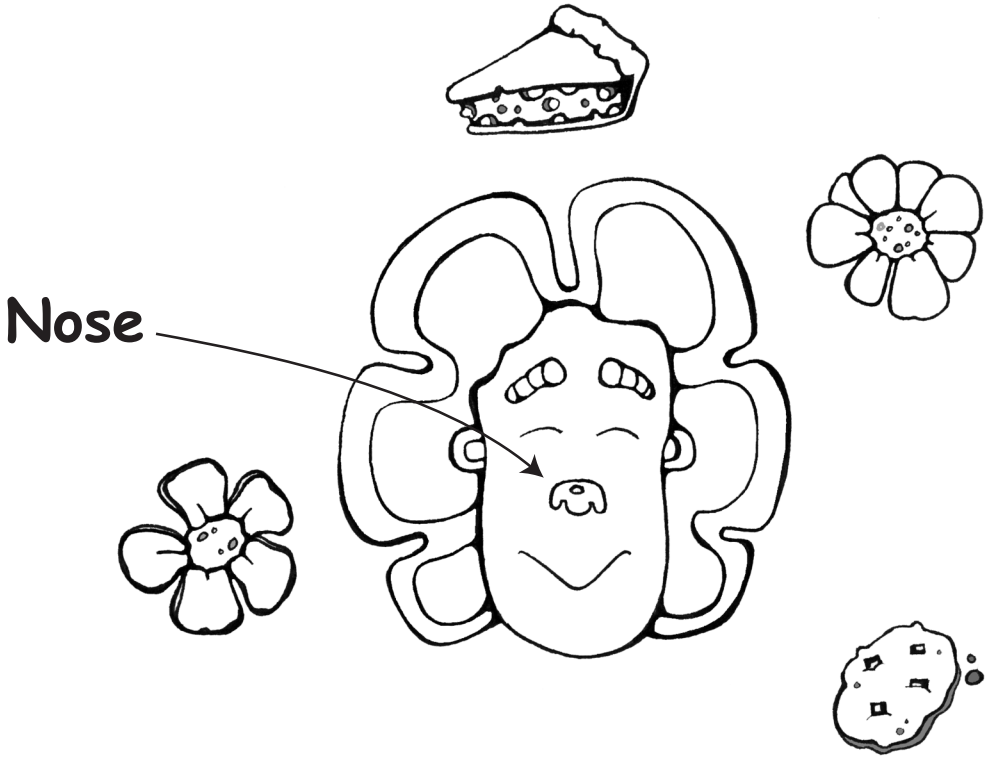
I breathe to stay alive. Without air my body would stop working in only a few minutes. Oops! Don't forget to let that air out!



It's really amazing! I breathe about 20 times every minute. Each breath is about a cupful of air. This means 20 cups every minute! If I'm running around it could be as much as a hundred cups of air that goes in and out of my **lungs** every minute. Imagine how much air I use in one day. It's no wonder I want to breathe clean air.

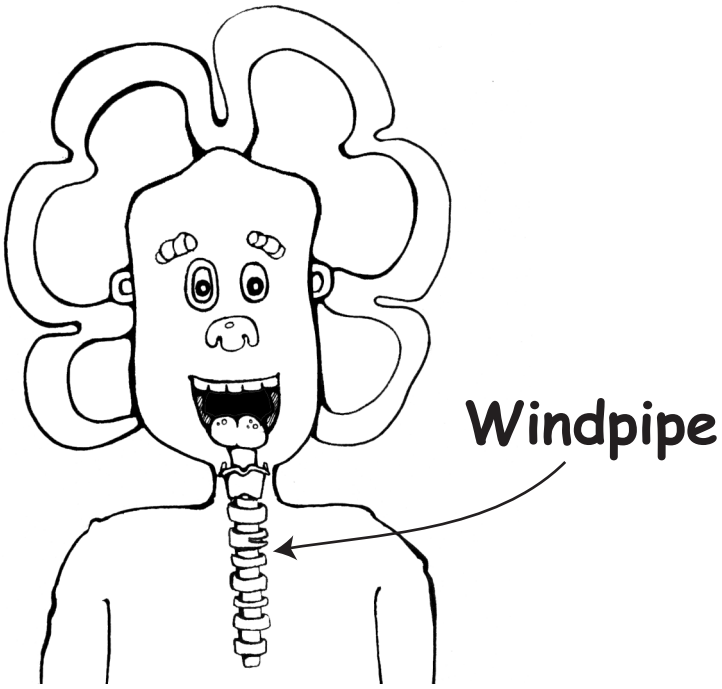
The air that enters my body through my **nose** is on its way to my **lungs**. Let's see how it gets there!

My **nose** does many useful things for me. It smells for me. It tells me when cookies are coming out of the oven or maybe if they have started to burn. As well, it sneezes (AHH CHOO!) for me when I get pepper up my **nose** or if I have an allergy.



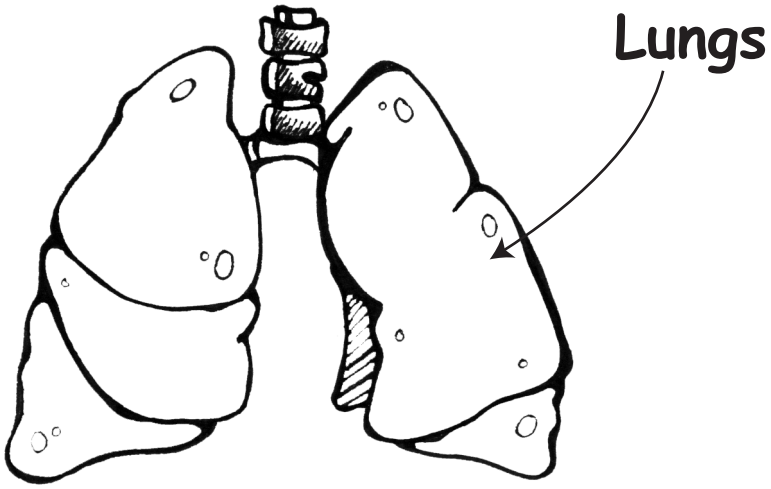
It warms the air on a cold day and cools the air on a hot day. My **nose** lets air in and cleans it as it goes by. The next destination: my windpipe!

My **windpipe** runs down my neck. It takes the air into my **lungs**. This long air tube cleans my air even more. Don't confuse this with the tube that takes food to my stomach!



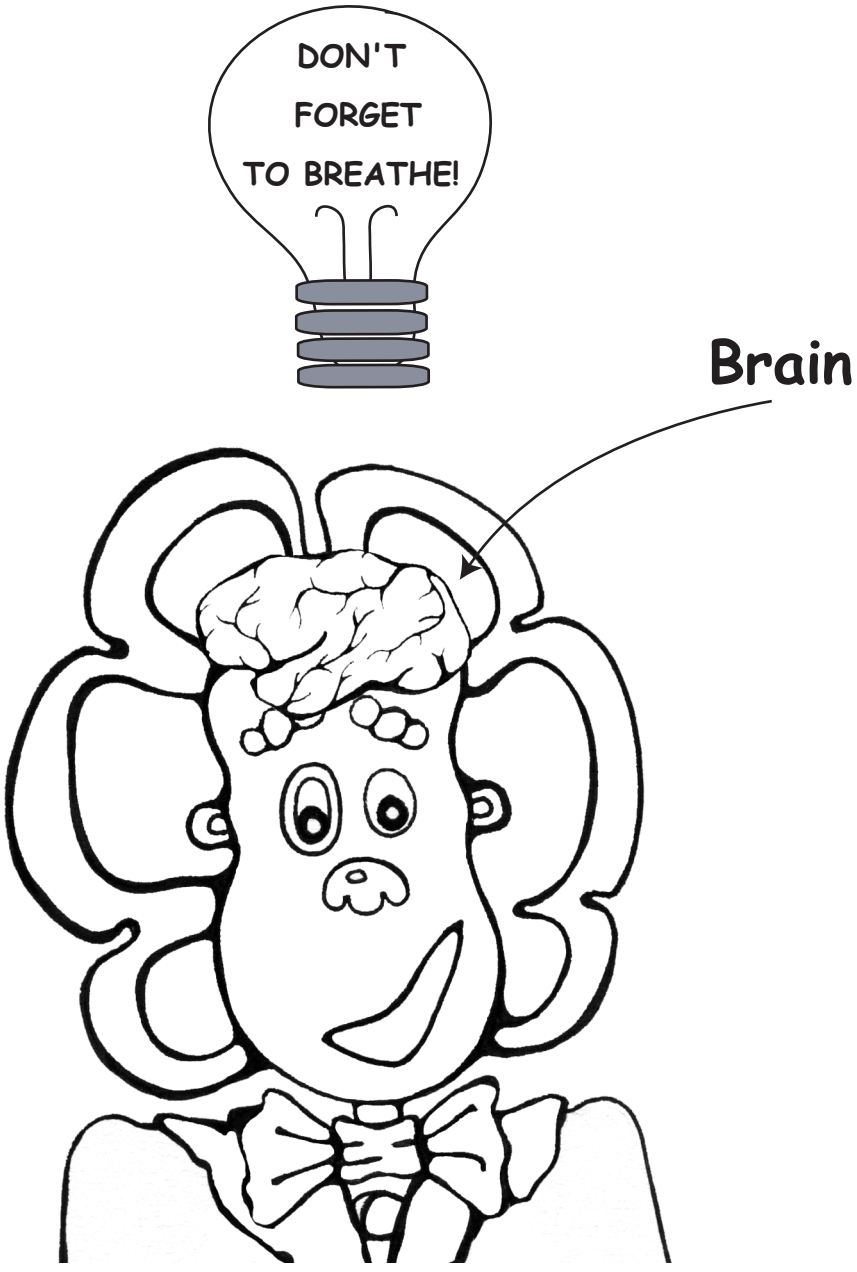
Both my **windpipe** and my nose have "slime" in them. This sticky stuff is great because it catches the dirt carried in by the air. Its real name is mucus. When I have a cold, I make too much mucus so I blow my nose a lot more often to empty it out.

We're almost there! The air I breathe goes deep into two big spongy bags called my **lungs**.

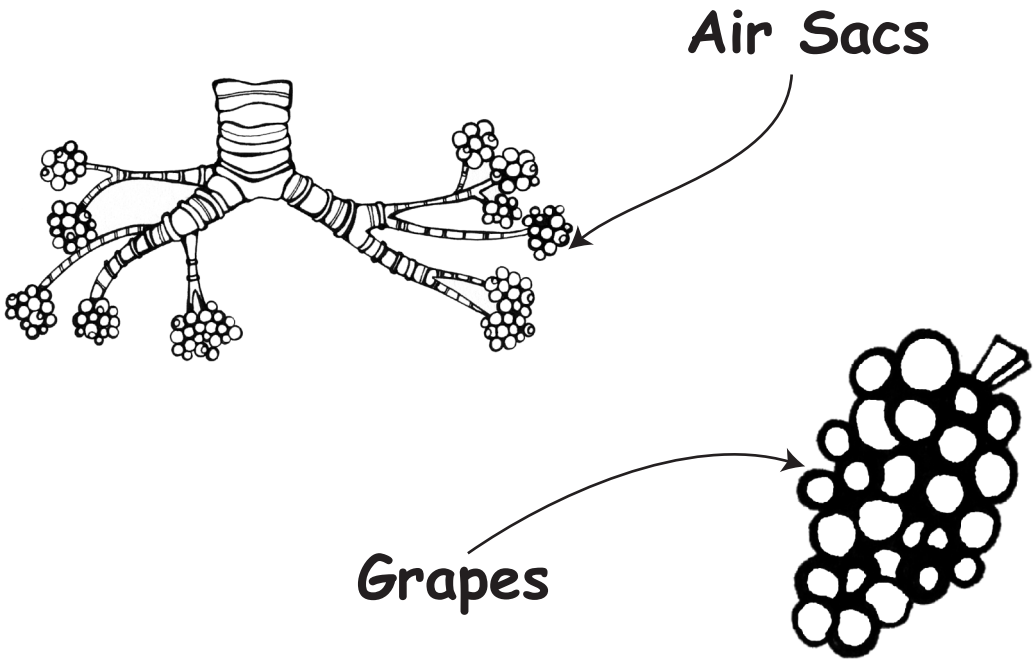


Take another big breath. See your chest moving? That's because your **lungs** are filling up with air! I want everyone to stand up. Put one hand on your collarbone and the other on the bottom of your rib cage. This is how big your **lungs** are! Pretty neat, hey! (OK, you can sit down now!)

My **brain** is a very important part of my breathing. My **lungs** take orders from my **brain**, telling me to breathe. My **brain** does this for me even when I'm sleeping!

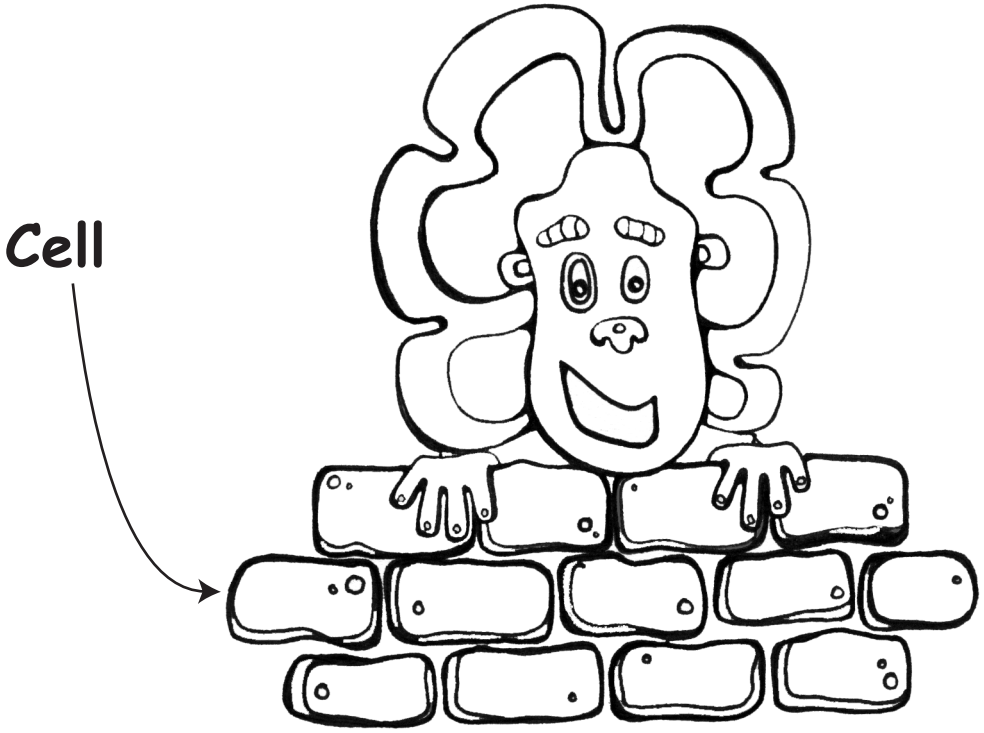


My brain tells me when to take a breath in. After the air goes through my nose and windpipe, it reaches my **lungs**. The air goes through tubes that get smaller and smaller. I'd have to use a microscope to see them. Finally, it reaches the end and falls into sacs, which are like miniature balloons. They look like bunches of grapes! I have millions of these **air sacs** in my **lungs**.



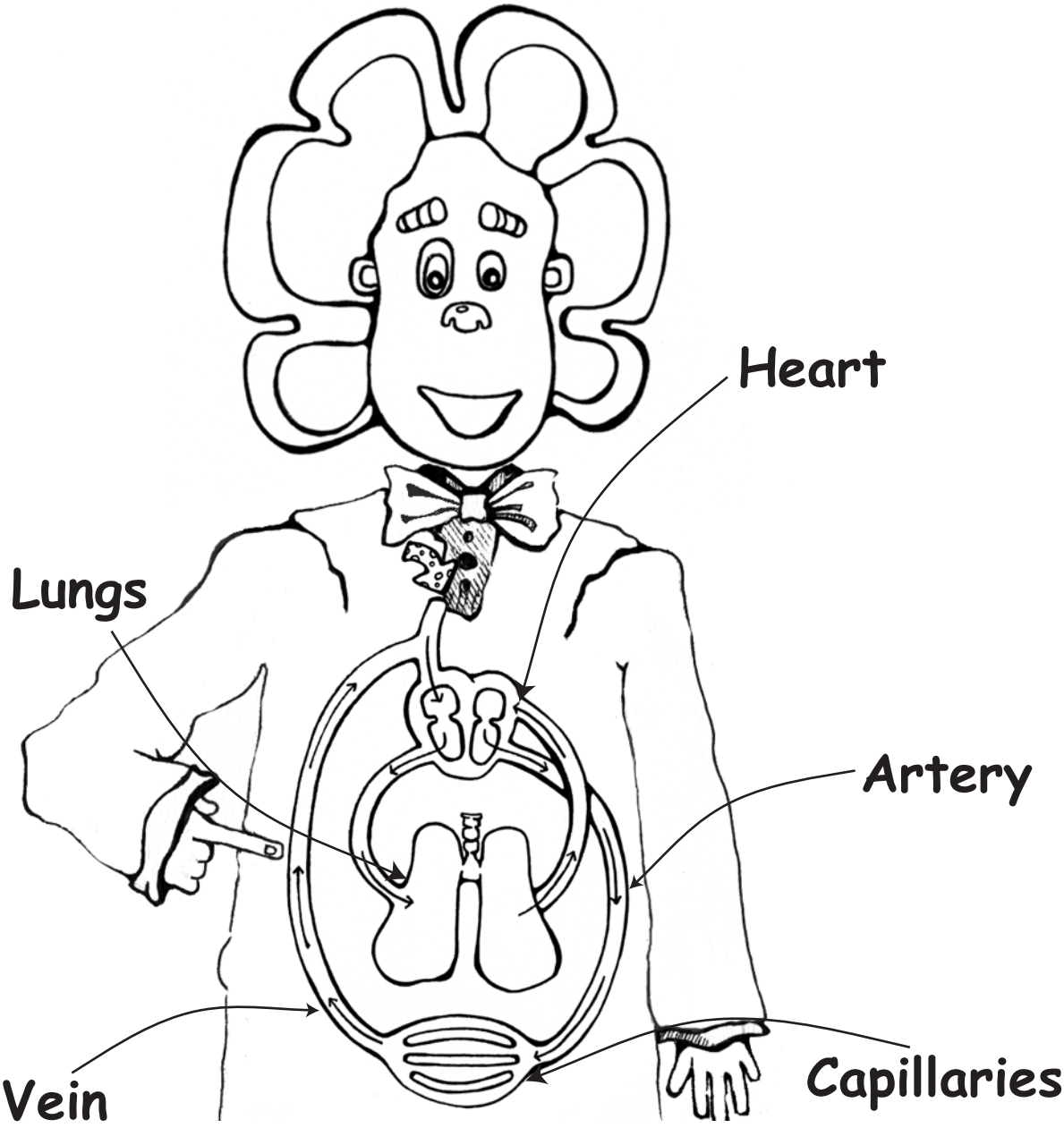
Inside these **air sacs**, the air, which we will now call oxygen, says goodbye to its friends. Now it is ready to begin the long trip around my body looking for a cell that needs it.

I want you to think about a building; your house or your school for example. Many buildings are made up of cement blocks or bricks. My body is made up of millions of tiny blocks that get piled like bricks. We call each brick a **cell**.



Each **cell** needs air and food to let it live and grow. How does the food that we eat and the air that we breathe get to all of these **cells?** It is carried in our blood.

My **heart** pushes blood to the **lungs** through my large arteries, into my tiny capillaries and finally into large veins which take it back to my **heart**.



My blood travels through tubes that we call **blood vessels**. Some of them are big enough that I can even see them under my skin. Look at your wrist. The blue coloured tubes you see just under your skin are tubes full of blood. They are called veins!

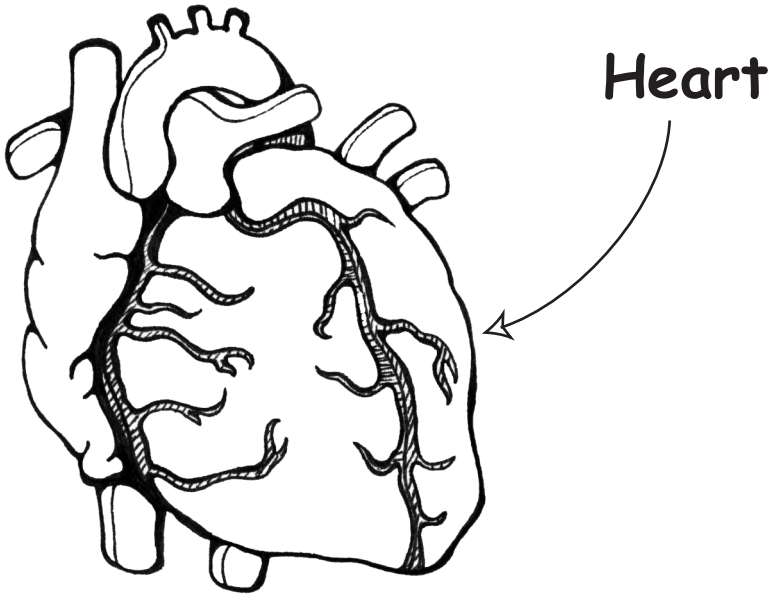
Most of my blood tubes are very tiny and we would need a microscope to see them. **Blood vessels** come in different sizes. The large tubes are called arteries and veins. The small tubes are called capillaries.

If we took out all the **blood vessels** in your body and placed them end-to-end, how far do you think they would go? Across your classroom? Across your classroom, and down the hall to the gym? Across your classroom, down the hall, out the gym door and across the playing field?

Believe it or not, your own **blood vessels** would go across your classroom, down the hall, out the gym door, across the playing field and keep going all the way across the world - and them come back and do it again!

Yes, it is true. The tubes that carry blood around your body, if put end-to-end, could stretch right around the world. They sure are tiny, aren't they?

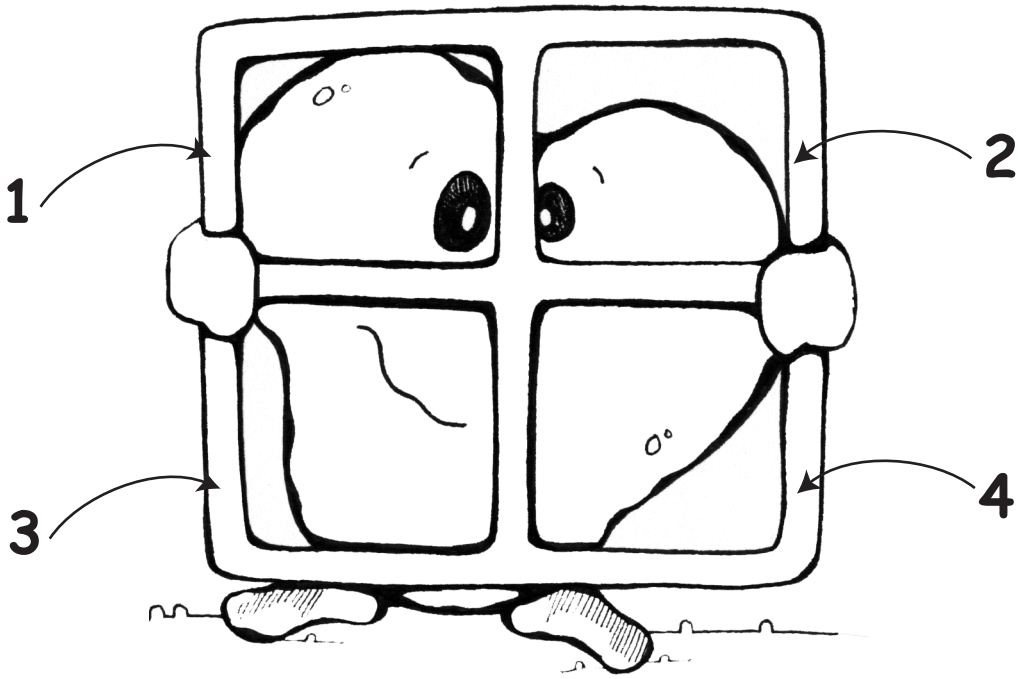
So what keeps our blood flowing? I'll give you a hint! It's a big muscle that acts like a pump, which sits in the middle of my chest.



You guessed it. It's my **heart**.

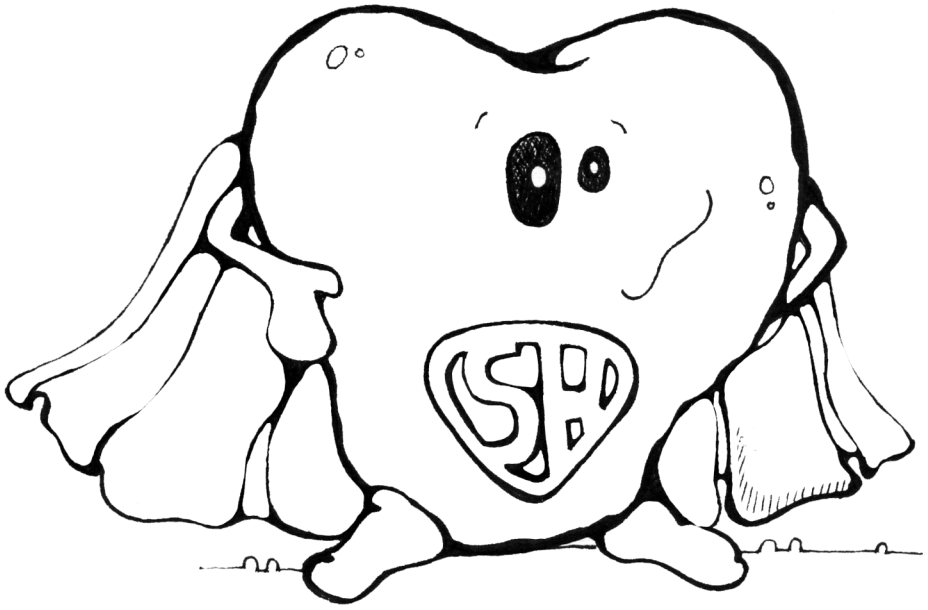
What does a **heart** look like? Well, as you can see, it's not really shaped like a valentine **heart**. Your **heart** is in the middle of your chest, tucked in snuggly behind your **lungs**. Clasp your hands together. That's about the size of your **heart**!

Think of your **heart** as a box with a divider from top to bottom and another one from side to side.



I now have four sections. We call them **chambers**. The two bottom sections are a little bit bigger than the ones on top. The four **chambers** all have specific jobs to do in order to pump the blood.

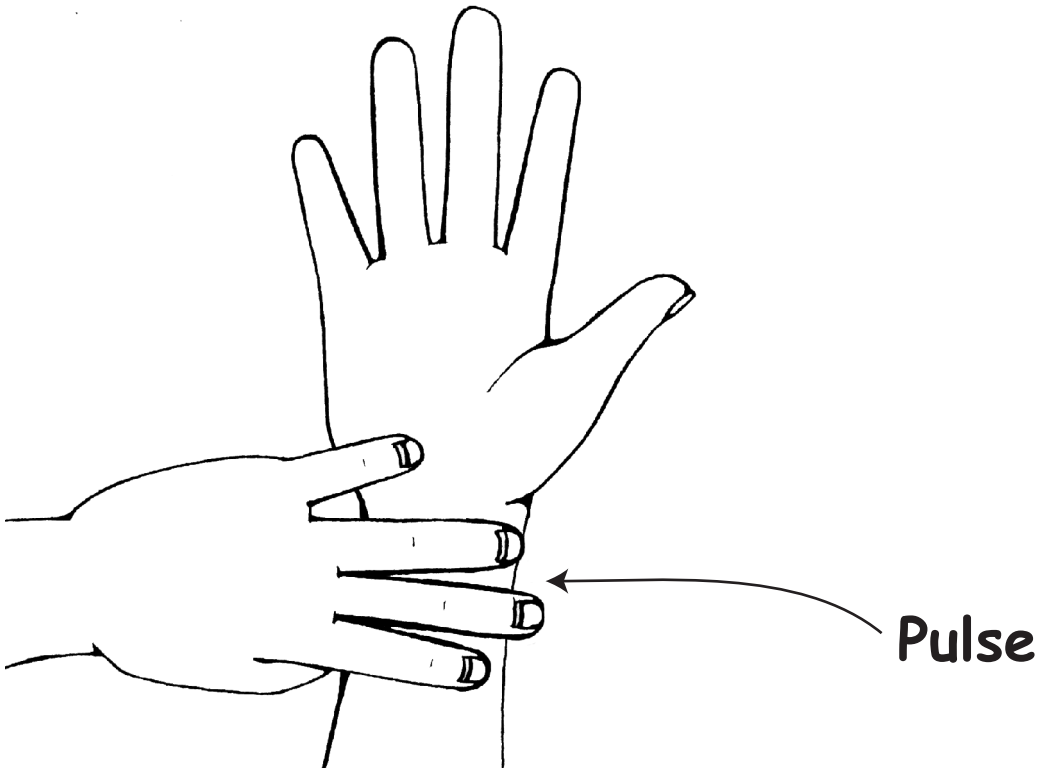
The **heart** pumps all day and all night. It never takes a rest or takes a day off.



It just keeps pumping. All day, every day, my **heart** works by squeezing its big muscles and pushing blood through the many kilometers of tubing. Clasp your hands again. Squeeze your right hand and then squeeze your left hand. This is the way your **heart** pumps blood through your body! It squeezes together about once every second and even faster if you are running around.

Want to feel you **heart** pumping? Maybe you have had someone take your **pulse** at the hospital or doctor's office. Let's try it!

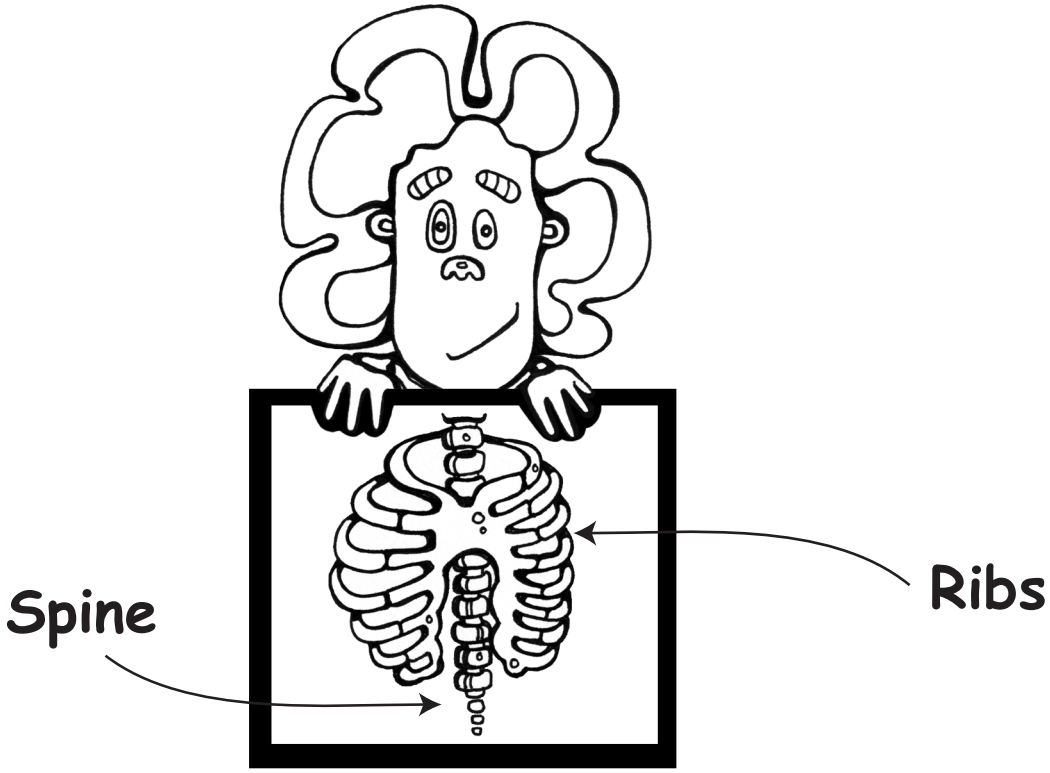
Place one arm flat on your desk or table with your palm up. Place the three fingers of your other hand along the outside edge of your arm just where your arm meets your hand. (Don't use your thumb!)



Feel a **pulse?** Keep trying! It must be there somewhere.

Good luck!

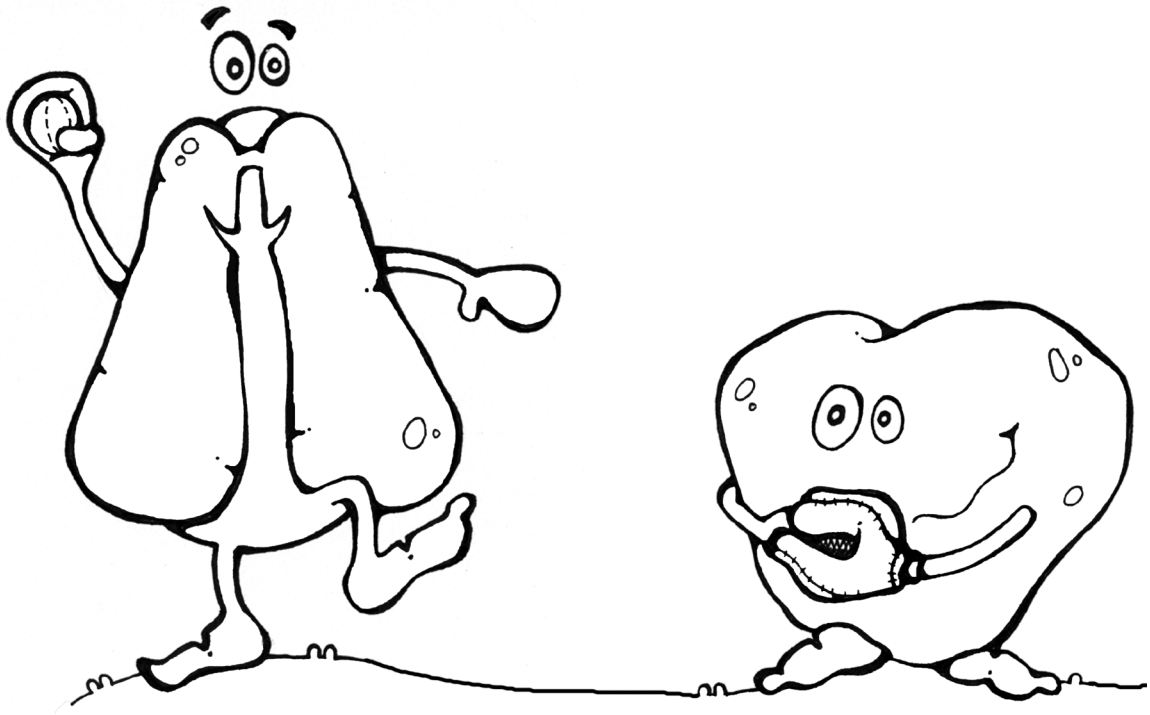
My **heart** and **lungs** are so important that they need to be protected!



My **ribs** and **spine** protect my **heart** and **lungs**. There are other ways to help my **body buddies** stay safe and healthy, what do you think they are?

Your **heart** and **lungs** work better with practice,

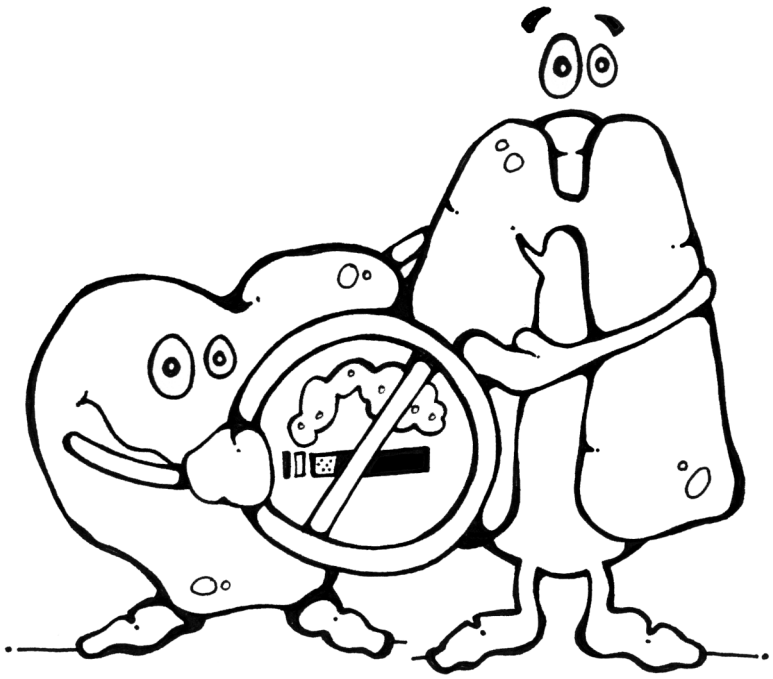
so I need to keep exercising!



Swimming, running, or playing catch are all fun things to do!

And guess what?! My **heart** and **lungs** love it!

Not everyone treats his or her **lungs** nicely. **Smoking** can make you **heart** and **lungs** very sick. Smoke causes the blood vessels to become plugged. It stops the **lungs** from cleaning out the dirt in the air. It also makes your **heart** work harder!

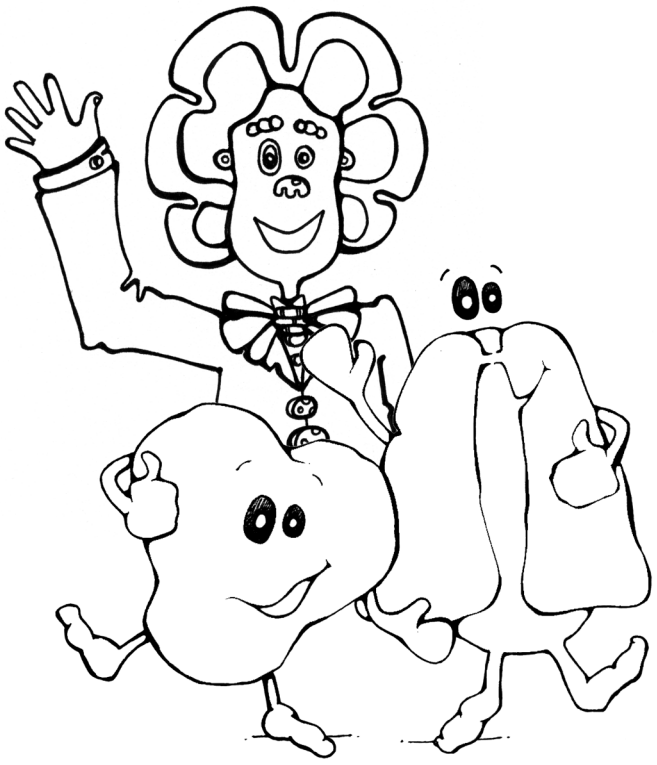


I depend on my **body buddies** every minute of my life! I don't want to hurt them by **smoking**!

I eat **foods** that are good for me. Fries and ice cream are yummy and OK to eat once in awhile, but we need to eat **food** that won't plug our blood vessels.

Give your **heart** a treat. It really likes **fruits** and **vegetables**.

I hope you have listened carefully and have learned that your **heart** and **lungs**, your **body buddies,** are very special!



Well, so long for now. Remember: if you take care of your **body buddies,** they will take really good care of you!

Bye bye my friends!