

Your lungs work like a balloon. They expand and deflate with air, just like a balloon does. There is one difference, however, between how your lungs and a balloon work—a balloon fills with air when air is pushed in from the outside. If your lungs were like this, you would need an outside pump to push the air in. So, how do your lungs fill with air?

**PROCEDURE**

1. Examine the model of human lungs shown in the diagram. With a partner or in a small group, share your ideas about how this model could work to cause the balloons to inflate.
2. If possible, obtain materials to build this model, or a similar model of human lungs, to test your ideas.

**Materials**

- Tape
- Scissors
- 2 Straws
- 3 Large Balloons
- 1 500 ml Pop Bottle

**ANALYSIS**

1. Describe what happens to the balloons as the volume of air inside the container changes.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
2. Would the model work (that is, would the balloons inflate) if the system were not airtight? Justify your answer.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Create a flowchart to show how air moves in and out of the balloons. Begin with the rubber membrane expanding.

