

Launch Lab: Modelling Your Lungs Answer Key

Answers to Analysis Questions

1. As you pull down on the rubber membrane, the volume of the plastic container increases. This cavity is airtight, so an increase in its volume means that the same amount of air is now contained in a larger space. The result is lower pressure in the container. Since air will move from an area of higher pressure to an area of lower pressure, air rushes into the lungs from the external environment. The opposite occurs when you release the rubber membrane.
2. No. If the system were not airtight, the air pressure inside the container would always be equal to the air pressure outside the container, and the balloons would not change their shapes.

3.

