

Name:

Date:

Class:

Just Breathe Activity – Lung Worksheet **Answers**

1. Describe what happens when you inhale (when you pull down on the bottom balloon in your model).



The balloons (your lungs) inflate, take in more air, or get bigger.

Technical Explanation: During inhalation, the diaphragm contracts downward, and rib muscles pull upward, causing air to fill the lungs. (This increases the volume of the thoracic cavity and decreases pressure in the lungs — the air will flow from the higher pressure environment to lower pressure area in the lungs.)

2. Describe what happens when you exhale (when you push up on the bottom balloon in your model).

The balloons (your lungs) deflate, push out the air, or get smaller.

Technical Explanation: During exhalation, the diaphragm relaxes and the lungs contract which causes air to be pushed out from the lungs. (This decreases the volume of the thoracic cavity and increases pressure in the lungs — the air will flow from the higher pressure environment to lower pressure area outside the lungs.)

3. Why do you think some people can inhale more air at one time than others can?

They have a bigger chest cavity, larger lungs or stronger diaphragm muscle.

Technical Explanation: The larger the chest cavity, the more air a person can inhale at one time.

4. What might happen if you punctured your chest cavity?

Your lungs could not take in more air without it leaking out; you could not breathe in and out.

Technical Explanation: The pressure would be the same inside *and* outside the lungs — air and waste products would not be forced in and out of the lungs. (You could not change the size of the thoracic cavity if there was a leak in it.)