

CHAPTER 7	The Mechanics of Breathing Answer Key	BLM 7.2.1A
ANSWER KEY		

1. a) Inhalation:

Flowchart should show:

- external rib muscles and diaphragm contract
- rib cage moves up and out and floor of chest cavity moves downward
- volume of thoracic cavity increases
- air pressure in thoracic cavity decreases
- lungs are drawn outward and expand
- air moves into the lungs because pressure in lungs is less than in the environment

b) Exhalation:

Flowchart should show:

- diaphragm and rib muscles relax
- volume is reduced in thoracic cavity
- volume of lungs decreases, pressure in lungs increases
- air moves from lungs to the lower pressure environment outside of the body

2. Lung collapse:

- a) Pneumothorax is the medical term for lungs collapsing.
- b) If air collects between the pleura because of an injury, the pressure outside of the lungs causes them to collapse.
- c) Physicians insert a tube into the chest to withdraw the air that has entered the pleura, and allow the lung to re-inflate.