

**LABORATORY EXERCISE 46  
BREATHING AND RESPIRATORY VOLUMES**



**Critical Thinking Application Answers**

Aging results in some natural loss of elasticity of the lungs as well as the muscles (diaphragm and intercostal muscles) used in breathing. This can be measured by a vital capacity test.

**Laboratory Report Answers**

**PART A**

- |                         |                          |
|-------------------------|--------------------------|
| 1. Ventilation          | 7. External intercostal  |
| 2. Atmospheric          | 8. Visceral pleura       |
| 3. 760                  | 9. Surfactant            |
| 4. Atmospheric pressure | 10. Elastic recoil       |
| 5. Phrenic              | 11. Internal intercostal |
| 6. Increases            | 12. Abdominal wall       |

**PART B**

- |      |      |
|------|------|
| 1. a | 5. d |
| 2. g | 6. h |
| 3. e | 7. c |
| 4. f | 8. b |

**PART C**

- (experimental results).
- Answers will vary.
  - Answers will vary.
  - A measurement of residual volume is needed.
- Answers will vary.