

RESPIRATORY SYSTEM:

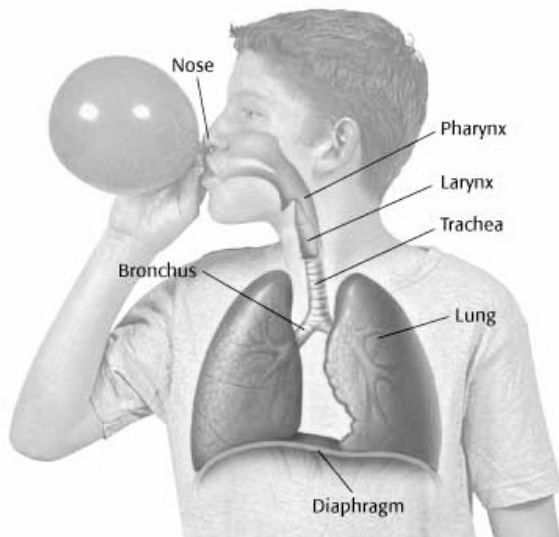
Goal: Diffusion of oxygen from the lungs to the red blood cells. This allows the tissues to pick up the oxygen which then can be used to produce energy through cell respiration. Respiration also releases carbon dioxide from the tissues.

External Respiration: The exchange of oxygen and carbon dioxide between the lungs and the blood.

Internal Respiration: The exchange of oxygen and carbon dioxide between the blood and the tissues.

Anatomy of the Respiratory System (See Diagram)

Nose → Pharynx → Trachea → Bronchi → Bronchioles → Alveolar Sacs



- Advantages of the nose: Air is Warmed, Moistened & Filtered!
- Alveolar Sacs: This is the location of gas (O_2 & CO_2) exchange

Physiology of the respiratory system:

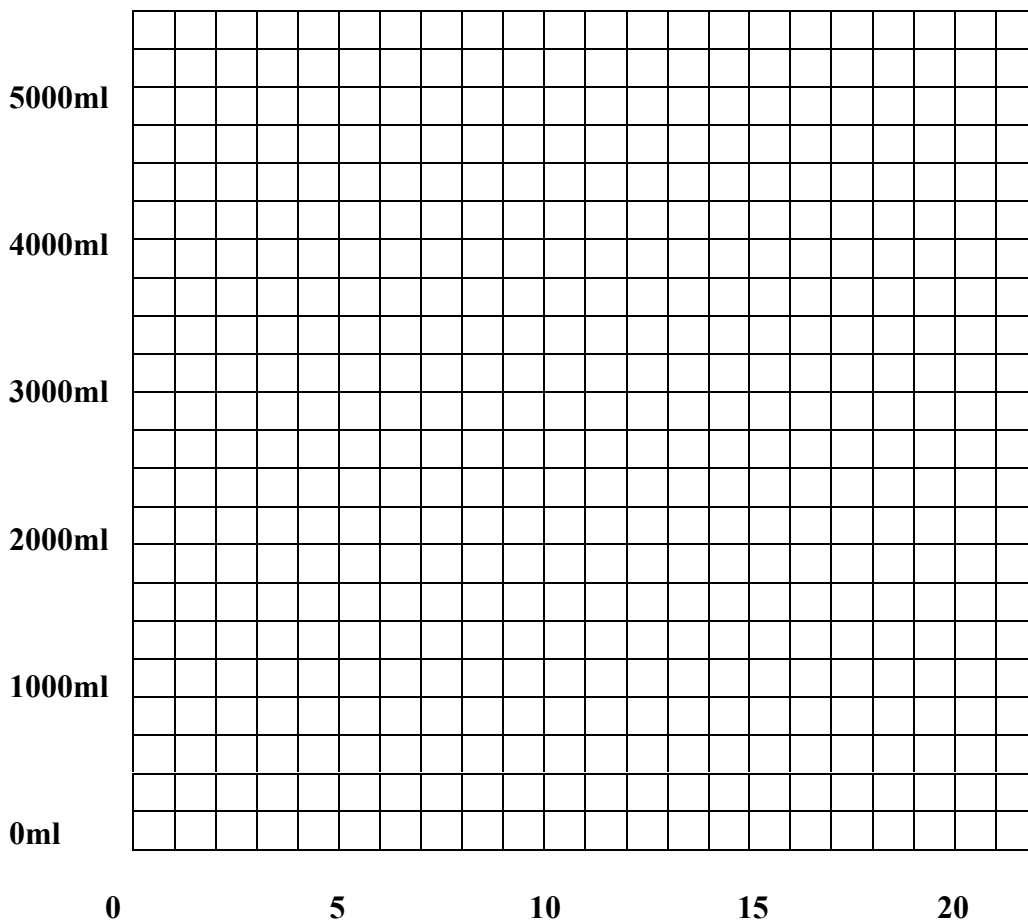
The process of inhaling and exhaling are a result of the diaphragm muscle increasing and decreasing the pressure on the lungs.

INHALE: The diaphragm contracts which decreases the pressure on the lungs to a level below atmospheric pressure which in turn allows air to rush into the lungs.

EXHALE: The diaphragm relaxes which increases the pressure on the lungs to a level above atmospheric pressure which in turn allows air to rush out of the lungs.

[SEE EXAMPLE!](#)

- Tidal volume- the volume of air inspired or expired during quiet breathing
- Inspiratory reserve volume- the amount of air that can be inspired forcefully after inspiration of the normal tidal volume
- Expiratory reserve volume- the amount of air that can be expired forcefully after expiration of the normal tidal volume
- Residual volume- the volume of air still remaining in the respiratory passages and lungs after a maximum expiration
- Pulmonary capacity -is the sum of two or more pulmonary volumes
- Vital capacity- the sum of the inspiratory reserve volume, the tidal volume and the expiratory reserve volume; it is the maximum volume of air that a person can expel from his respiratory tract after a maximum inspiration



TRIAL	TIDAL VOLUME	EXPIRATORY RESERVE VOLUME	VITAL CAPACITY
# 1			
# 2			
# 3			
AVERAGE			
CLASS AVERAGE			