

Lab 7: Respiratory System

Become familiar with the structures of the respiratory system (Exercise 36). Identify structure and function of the upper respiratory tract (Fig. 36.1, 36.2, 36.3, 36.5a). Identify laryngeal structures specified on the sheep larynxes and models available.

Define & explain the four processes of respiration on page 532 (Pulmonary Ventilation, External Respiration, Gas Transport, Internal Respiration).

Review the microscopic anatomy of the trachea and lung (Activity 3, Fig. 36.6 & 36.7). Understand Tidal Volume, Inspiratory & Expiratory Reserve Volume, Reserve Volume, and Vital Capacity (p.546).

Name the structures separating the nasal passage from the oral cavity.

Name the three parts of the pharynx. _____

Name three functions of the nasal cavity. _____

What bone makes up the roof of the superior conchae? _____

What is the function of the epiglottis? _____

How does the type of cartilage it is made of facilitate this function? _____

What is the function of tracheal cartilages? _____

Give another name for the tracheal cartilages. _____

Give another name for the Adam's Apple. _____

Give some characteristics of the epithelium lining the trachea. _____

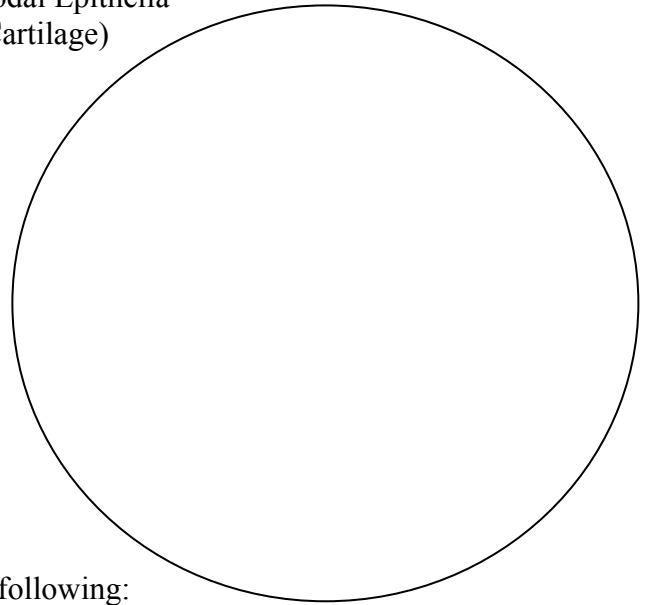
What is the vital capacity and which respiratory volumes comprise it? _____

Slide Assignment: Respiratory Anatomy

(Exercise 36 in Lab Text, Chapter 17 in Histology Text)

Draw the following slides using the figures in the lab and histology texts as a reference. Use whichever magnification works best to show all given structures. Please note that not every slide will show everything; you will need to look at multiple slides and/or sources. Your drawings should artistically combine views to include all structures.

- **Trachea** – label and understand function of the following:
 - Mucosal layer made up of:
 - Pseudostratified Ciliated Columnar Epithelia
 - Goblet Cells
 - Lamina Propria (Areolar Connective Tissue)
 - Submucosal layer made up of:
 - Seromucous Glands lined with Cuboidal Epithelia
 - Cricoid and/or Thyroid Cartilage (Hyaline Cartilage)
 - Adventitia/Serosa layer



- **Lung** – Label and understand function of the following:
 - Terminal bronchiole made up of:
 - Lumen
 - Mucosal layer made up of:
 - Pseudostratified Ciliated Columnar Epithelia
 - Alveoli made up of:
 - Simple Squamous Epithelia
 - Alveolar Ducts

