2.05 Remember the structures of the respiratory system
2.05 Remember the structures of the respiratory system

Essential question

What are the structures of the respiratory system?
Structures of the respiratory system

**Upper Respiratory System**
- Nose
- Sinuses
- Pharynx
- Epiglottis
- Larynx

**Lower Respiratory System**
- Trachea
- Lungs

2.05 Remember the structures of the respiratory system
Structures of the Upper Respiratory System

**NDSE**

**Nasal cavity** – space behind the nose
- Vestibular region
- Olfactory region
- Respiratory region

**Nasal septum** – cartilage that divides the nose into right and left sides

**Turbinates** – scroll-like bones in the respiratory region

**Cilia** – nose hairs

2.05 Remember the structures of the respiratory system
**Structures of the Upper Respiratory System**

**Sinuses** - Cavities in the skull.

- Ducts connect sinuses to the nasal cavity
- Lined with mucous membrane to warm and moisten the air
- Provide resonance to the voice
Structures of the Upper Respiratory System

- **PHARYNX**
  - Throat
    - Nasopharynx
    - Oropharynx
    - Laryngopharynx
  - About 5” long
Structures of the Upper Respiratory System

**EPIGLOTTIS**

A flap or lid that closes over the opening to the larynx when food is swallowed.
2.05 Remember the structures of the respiratory system

**Structures of the Upper Respiratory System**

**Larynx**

- **Voice Box**
  - Triangular chamber below pharynx
  - Within the larynx are vocal cords, the *glottis*
  - Also called the *Adam’s Apple*
Structures of the Lower Respiratory System

**Trachea**

- **Windpipe**
  - Approximately 4 ½” long
  - The walls are composed of alternate bands of membrane and C-shaped rings of hyaline cartilage.
  - Lined with ciliated mucous membrane

Can you identify the trachea?
Structures of the Lower Respiratory System

- At the lower end of trachea, the bronchus divide into **right and left branches**.

- As they enter the lungs, the bronchus subdivide into bronchial tubes and into bronchioles.

- At the end of the bronchioles are alveolar ducts and clusters of alveoli.
2.05 Remember the structures of the respiratory system

**Structures of the Lower Respiratory System**

- **Bronchi**
  - Ciliated mucous membrane and hyaline cartilage

- **Bronchial Tubes**
  - Cartilaginous plates

- **Bronchioles**
  - Thinner walls of smooth muscle
  - Lined with ciliated epithelium
Structures of the Lower Respiratory System

**ALVEDLI**

- Composed of a single layer of epithelial tissue
- Contain surfactant
- Each alveolus is surrounded by capillaries
Structures of the Lower Respiratory System

- The lungs are located in the thoracic cavity
  - Apex
  - Base
- Fit snugly over diaphragm.
- Lung tissue is porous and spongy.
  - **Right lung**
    - Larger and shorter than the left lung
    - Displaced by the liver
    - 3 lobes
  - **Left lung**
    - Smaller than the right side
    - Displaced by the heart
    - 2 lobes
Structures of the Lower Respiratory System

**PLEURA**

- Thin, moist slippery membrane that covers lungs
- Double-walled sac
- Space is pleural cavity – filled with pleural fluid
Structures of the Lower Respiratory System

**MEDIASTINUM**

- A septum or cavity between two principal portions of an organ.
  - Contains the heart and its large vessels, trachea, esophagus, thymus, lymph nodes, and connective tissue
- Also called the interpleural space
- Located between the lungs
- Contains the thoracic viscera
Structures of the Lower Respiratory System

**DIAPHRAGM** from the muscular system!

2.05 Remember the structures of the respiratory system
Let’s review the structures of the respiratory system …
2.05 Remember the structures of the respiratory system

Essential question

What are the structures of the respiratory system?