Respiratory System (Mammalian)

What is the Function of the Respiratory System?
Respiratory System (Mammalian)

What is the Function of the Respiratory System?

- Inhale oxygen ---> cellular respiration
- Exhale carbon dioxide --> produced from cellular respiration
- Provide an area for gas exchange
The Human Respiratory System

- **nasal cavity**
  - it warms, moistens, filters the air
  - mucous and hairs help in this function
The Human Respiratory System

- larynx
  - can be closed off by the epiglottis
  - contains the vocal cords
  - enlarged part of the trachea
  - enclosed by cartilage
The Human Respiratory System

- **trachea**
  - aka windpipe
  - pathway to lungs
  - walls are supported by cartilage rings
• **trachea**
  - aka windpipe
  - pathway to lungs
  - walls are supported by cartilage rings
  - lined with **goblet cells** & ciliated cells
  - produce mucous & are lined with cilia
  - help to clean out the lungs
Partner A
- Explain what smoking does to cilia.

Partner B
- Explain back & be sure to include additional facts that may have been forgotten.
The Human Respiratory System

- **bronchi**
  - (right & left bronchus)
  - branches of trachea that lead into both lungs

- **bronchioles**
  - smaller branches of the bronchi
The Human Respiratory System

- **Alveoli**
  - “grape-like” sacs found at the end of bronchioles
  - surrounded by network of capillaries
  - exchange of oxygen & carbon dioxide occurs here
  - fragile; walls of alveoli are one-cell thick
  - surrounded by a moist protein

--- why do alveoli need to be moist?
NB: The respiratory system & the circulatory system are connected at the alveoli.
The Human Respiratory System

- **diaphragm**
  - strong muscle that is found under the lungs
  - involved in breathing
- nasal passages
- nostril
- larynx
- vocal cords
- trachea
- bronchus
- lung
- bronchioles
- alveoli
- diaphragm
- pharynx
- epiglottis
- mouth
Complete the chart

<table>
<thead>
<tr>
<th>Structure (describe what it is made of)</th>
<th>Function (what does it do)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trachea</td>
<td></td>
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<tr>
<td>Epiglottis</td>
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<tr>
<td>Larynx</td>
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<tr>
<td>Bronchi</td>
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<tr>
<td>Bronchioles</td>
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<tr>
<td>Goblet cells</td>
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<tr>
<td>Alveoli</td>
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<td>Diaphragm</td>
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</tbody>
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Classwork/Homework

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