

Student learning outcome (SLO):

<ul style="list-style-type: none"> • Define respiratory system • Identify organs of the respiratory system. • Explain the process of breathing and its mechanism. 	<ul style="list-style-type: none"> • Discuss the types of respiration. • Write about the major differences between breathing and respiration.
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Overview:

The main purpose of this lesson is to help students understand how we breathe, exchange oxygen for energy, and eliminate carbon dioxide. It promotes the awareness of healthy respiratory habits, emphasizing the vital role of the lungs in sustaining life.

Introduction:

Lead the students in learning about,
'Anatomy and physiology of respiratory system'.
'Respiratory System'

Video of the lecture can be shown to the students as well.

https://youtu.be/0fVoz4V75_E?si=Eug--Gtx1v8O5QTj	
https://youtu.be/mOKmjYwfDGU?si=7Su15hbrfZb6oDAb	

Keywords:

Lungs, trachea, bronchi, alveoli, diaphragm, breathing, inhalation, exhalation, carbon dioxide, oxygen, gaseous exchange, voice box, cartilage

Material

- Plastic bottle
- 2 Balloons
- Rubber bands
- Plastic straws
- Tape
- Scissors
- Clay
- Marker

Activity: Lungs Model

- Cut the bottle in half horizontally
- Discard the bottle cap and the upper part of the bottle

- Stretch a balloon over the bottom end of the bottle and secure it with a rubber band. This represents the diaphragm
- Cut the necks of both balloons
- Stretch one balloon over the top end of the bottle. Secure it with a rubber band
- Attach the second balloon to the first one using another rubber band. This represents the lungs
- Insert a plastic straw into the open end of the bottle. This represents the trachea
- Connect another straw to the end of the first straw, symbolizing the bronchi.
- Tap one end of the straw to each of the lungs (representing the bronchial tubes)
- Use a marker to label the different parts of the model

Essential questions:

Before starting the lesson, ask some questions to explore the background knowledge of students:

1. What is the main function of the respiratory system?
2. Name the organs involved in the respiratory system.
3. How does air travel from the nose to the lungs?
4. What is the role of diaphragm in breathing?
5. Why do we need oxygen for our body?
6. Where does the exchange of gases take place?
7. What are the tiny air sacs in the lungs called?
8. How does the smoking affect the respiratory system?