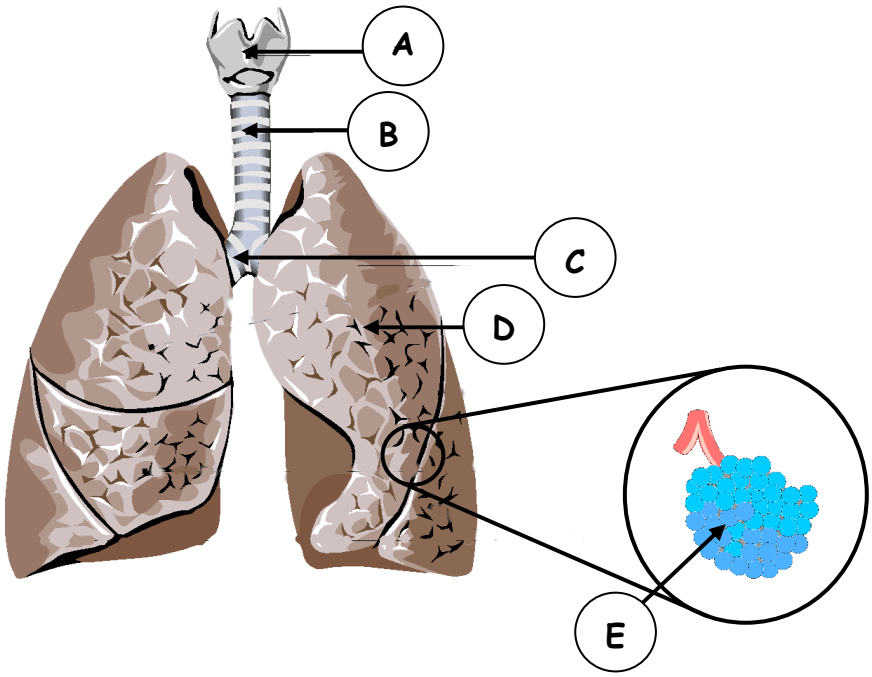
Respiratory System

1. The diagram below shows the human respiratory system. Identify the structures indicated.



Structure	Name
A	
B	
C	
D	
E	

2. Which structure is responsible for producing sound?

3. Which structures pass oxygen into the blood?

4. Which structure carries air from the trachea to the lung?

5. Which structures have very thin walls that are easily damaged?

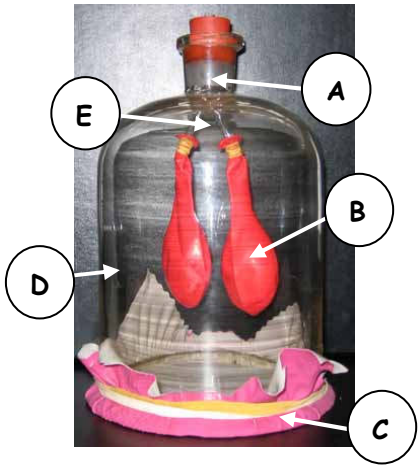
Did You Know

At rest, a person breathes about 14 to 16 times per minute. After exercise it could increase to over 60 times per minute.

New babies at rest breathe between 40 and 50 times per minute. By age five it decreases to around 25 times per minute.

The total surface area of the alveoli (the tiny air sacs in the lungs) is about the size of a tennis court.

6. Models are used in many areas of science as a tool to make predictions, estimate trends, and visualise processes. The diagram below is a model seen frequently in science classrooms to demonstrate how the lungs function.



In the table below, combine the labels from the picture with the correct structure within the lungs.

Structure in model	Structure in Lungs
C	
	Bronchus
A	
	Rib cage
B	

7. Circle the correct alternative to complete each description.

a. **Breathing in (inhalation):** As the rib cage (expands/contracts) and the diaphragm (contracts/relaxes), the pressure inside the rib cage (increases/decreases). This change in pressure causes the air from the atmosphere to move to an area of (lower/higher) pressure inside the lungs.

b. **Breathing out (exhalation):** As the rib cage (expands/contracts) and the diaphragm (contracts/relaxes), the pressure inside the rib cage (increases/decreases). This change in pressure causes the air in the lungs to move from an area of (low/high) pressure, to an area of (lower/higher) pressure in the atmosphere.

The Respiratory System Answers

1.

Structure	Name
A	*Larynx (voicebox)*
B	*Trachea*
C	*Bronchus*
D	*Lung (lobe)*
E	*Alveoli*

2. *The vocal cords are located within the larynx.*

3. *The alveoli pass oxygen into the blood.*

4. *The bronchus carries air from the trachea to the lung.*

5. *The alveoli have very thin walls that are easily damaged.*

6.

Structure in model	Structure in Lungs
C	*Diaphragm*
E	*Bronchus*
A	*Trachea*
D	*Rib cage*
B	*Lung*

7 a. **Breathing in (inhalation):** As the rib cage (**expands**) and the diaphragm (**contracts**) the pressure inside the rib cage (**decreases**). This change in pressure causes the air from the atmosphere to move to an area of (**lower**) pressure inside the lungs.

b. **Breathing out (exhalation):** As the rib cage (**contracts**) and the diaphragm (**relaxes**) the pressure inside the rib cage (**increases**). This change in pressure causes the air in the lungs to move from an area of (**high**) pressure, to an area of (**lower**) pressure in the atmosphere