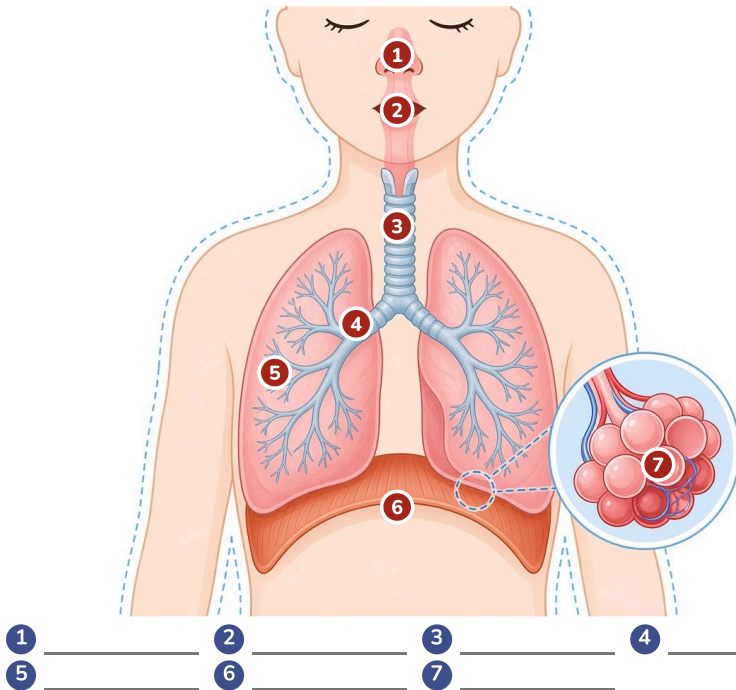




Instructions: No word bank: name the numbered parts from memory or from the module. Number the discoveries in order and write each date. Analyse the source, explain significance, then write full-sentence answers and plan the essay.

1. Name the parts (no word bank)



Did you know?

- Unfolded, the lining of the alveoli covers roughly half a tennis court.
- Air you breathe out still contains about 16% oxygen.
- The left lung has a notch for the heart.
- Laennec first rolled up paper into a tube to listen to a patient's chest.

Background

Every cell in your body needs oxygen to release energy from food. This process, respiration, also makes a waste gas called carbon dioxide. Breathing brings oxygen into the body and gets rid of carbon dioxide. At rest a child breathes about 20 to 30 times a minute; an adult about 12 to 20.

2. Timeline: order and date

Number the events 1 to 7 (1 = earliest) and write the date of each.

#	Event	Date
1	Malpighi describes alveoli and capillaries	
2	Laennec invents the stethoscope	
3	Priestley discovers oxygen	
4	Lister uses carbolic spray in surgery	
5	Vesalius describes the lungs	
6	Lavoisier names oxygen and explains breathing	
7	Doctors link smoking to lung disease	

3. Source analysis

With the tube I could hear the beating of the heart far more clearly than by putting my ear to the chest.

René Laennec, On Mediate Auscultation (1819), (paraphrased)

1. What did Laennec's tube let him hear more clearly?

2. Why might doctors before 1816 have found it hard to listen to the chest?

3. How is a modern stethoscope similar to and different from his tube?

4. Significance

Scientist or term	Who or what? Why does it matter?
Joseph Priestley	
Antoine Lavoisier	
René Laennec	
Marcello Malpighi	
Trachea	

5. Cause and consequence

1. Explain why smoking reduces how well someone can exercise.

2. Explain one consequence of Priestley's discovery of oxygen.

6. Longer answers (full sentences)

1. Explain how the alveoli are adapted for gas exchange (three features).

2. Explain the link between breathing and respiration.

3. Describe what happens to volume and air when you breathe out.

4. How did the stethoscope help doctors?

5. Explain in your own words: Explain what the diaphragm and ribs do when you breathe in and out.

7. Essay question

Essay: 'Breathing is the most important body process.' How far do you agree? Plan an essay.

Plan: introduction · point for (evidence) · point against (evidence) · conclusion with your judgement.
