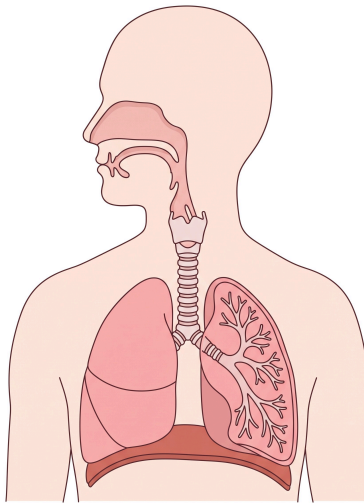


Respiratory System

How the body breathes



7

printable sheets

17

pages

All

answer keys included

Respiratory System Teaching Pack

How the body breathes

How to use this pack. The sheets are in a suggested teaching order: show the labeled diagram, have students label the blank one, then work through the practice sheets and finish with the quiz. Use them all over a week or pick the ones you need. The answer keys are together at the back.

What is inside

1. Teach

Respiratory System Diagram 3

2. Label

Blank Respiratory System 4

3. Match

Parts of the Respiratory System 5

4. Read

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5. Order

The Path of a Breath 8

6. Review

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7. Check

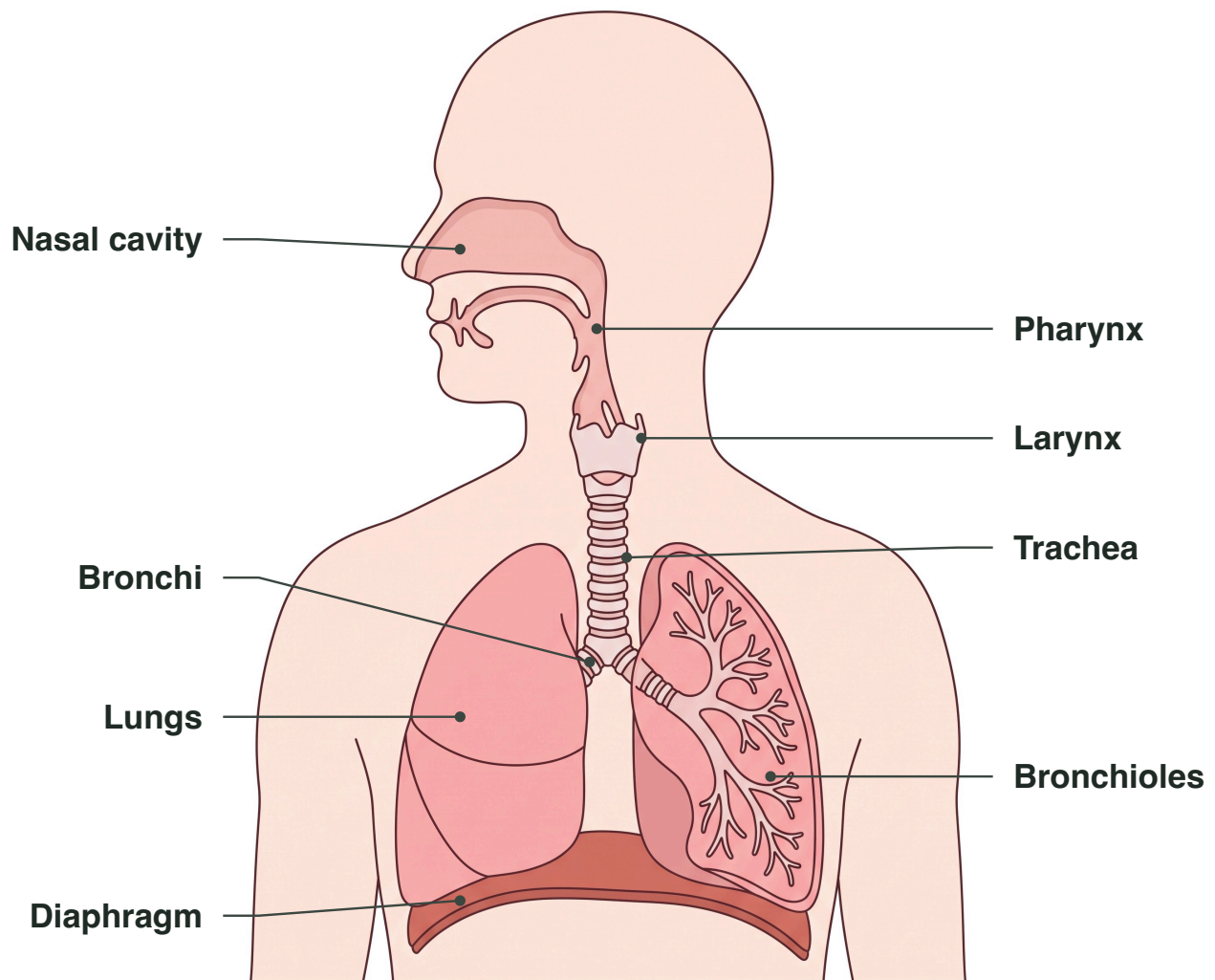
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Every answer key, in the same order 12

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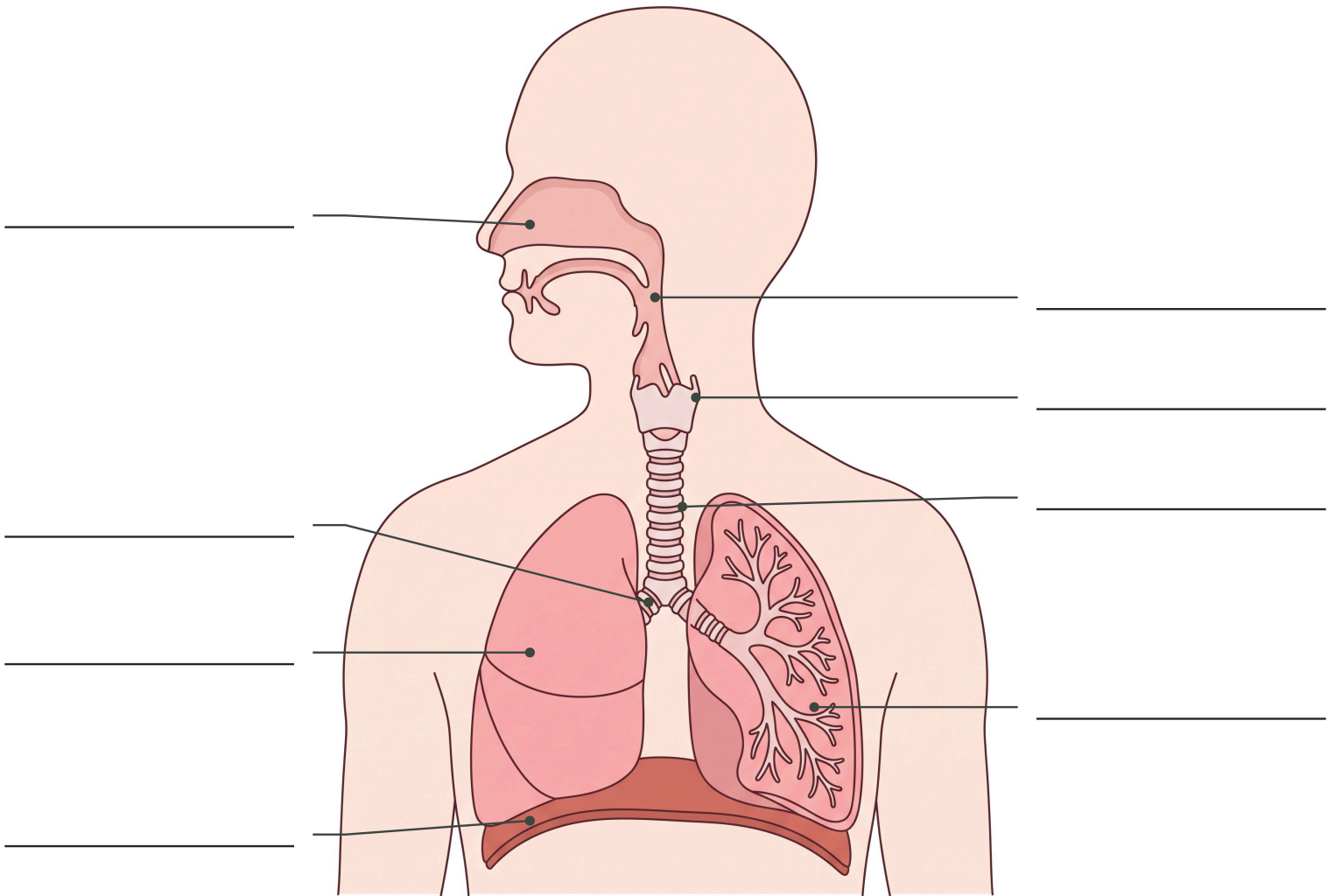
The Respiratory System



The Respiratory System

Name: _____

Write the name of each part on its line. Use the word bank.



Word bank

Bronchi

Bronchioles

Diaphragm

Larynx

Lungs

Nasal cavity

Pharynx Trachea

Parts of the Respiratory System

Use the labeled respiratory system diagram to help you.

Part A. Write the part that does each job.

Word bank

Bronchi

Bronchioles

Diaphragm

Larynx

Lungs

Nasal cavity

Pharynx

Trachea

1. The windpipe. It carries air down toward the lungs. _____
2. The dome-shaped muscle that powers breathing. _____
3. The space inside the nose. It warms, moistens and filters air. _____
4. Two large tubes that branch from the windpipe, one into each lung. _____
5. The voice box. It holds the vocal cords. _____
6. The two main organs of breathing, where oxygen passes into the blood. _____
7. The throat. Both air and food pass through it. _____
8. Smaller branching tubes deep inside the lungs. _____

Part B. Answer the questions.

1. Three kinds of tubes carry air down from the larynx. List them from largest to smallest.

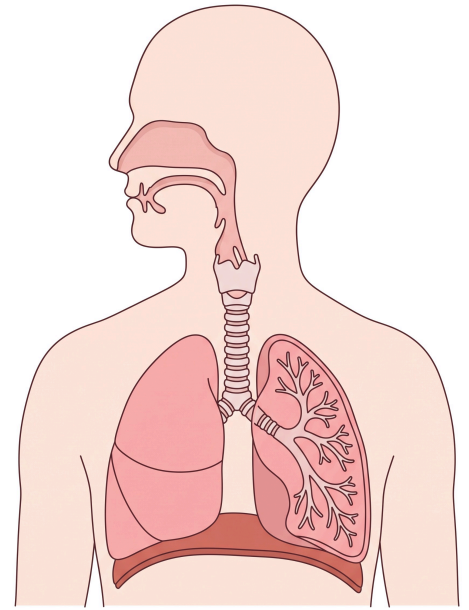
2. How is air different after it has passed through the nasal cavity?

3. Which part on this sheet is a muscle? What does it do?

How You Breathe

Read the text. Then answer the questions on the next page.

- 1 You breathe thousands of times a day, mostly without thinking about it. The cells in your body need **oxygen**, a gas in the air, to release energy from food. As cells use oxygen, they make a waste gas called **carbon dioxide**. The **respiratory system** brings oxygen into the body and removes carbon dioxide.
- 2 Air usually enters through the nose. Inside the nose is the **nasal cavity**, a space that warms, moistens and filters the air. Sticky mucus there traps dust. Next the air passes through the **pharynx**, or throat, which is a shared passage for air and food. Then it goes through the **larynx**, or voice box. The larynx holds the vocal cords.
- 3 Below the larynx is the **trachea**, or windpipe. Rings of stiff cartilage hold it open. At its lower end the trachea splits into two tubes called **bronchi**, one for each **lung**. Inside the lungs the bronchi divide again and again into smaller tubes called **bronchioles**, like the branches of a tree.
- 4 The smallest bronchioles end in clusters of tiny air sacs called **alveoli**. Each lung has millions of them. Their walls are very thin, and tiny blood vessels wrap around them. Oxygen passes through the walls into the blood, and the blood carries it to all of the body's cells. Carbon dioxide passes the other way, from the blood into the air sacs. It leaves when you breathe out.
- 5 Lungs have no muscles of their own. The **diaphragm**, a dome-shaped muscle under the lungs, powers breathing, with help from muscles between the ribs. When the diaphragm tightens, it flattens. The chest gets bigger and air is pulled into the lungs. When the diaphragm relaxes, it rises back into a dome and air is pushed out.



The respiratory system. One lung is cut open to show the tubes inside.

How You Breathe: Questions

Go back to the text to find each answer. The paragraphs are numbered to help you.

1. What is this text mostly about?

- ☐ How the voice makes sounds
- ☐ Why exercise is good for you
- ☐ How the body takes in oxygen and removes carbon dioxide
- ☐ How blood moves around the body

2. What does the nasal cavity do to the air you breathe in?

- ☐ It adds oxygen to it.
- ☐ It warms, moistens and filters it.
- ☐ It pushes it out of the body.
- ☐ It turns it into carbon dioxide.

3. Why does the text call the pharynx a “shared passage”?

4. Number the parts 1, 2 and 3 in the order air reaches them as you breathe in.

- ☐ Bronchioles
- ☐ Alveoli
- ☐ Bronchi

5. What holds the trachea open?

- ☐ The vocal cords
- ☐ Sticky mucus
- ☐ The diaphragm
- ☐ Rings of stiff cartilage

6. What happens in the alveoli?

- ☐ Dust is trapped by mucus.
- ☐ Food and air are kept apart.
- ☐ Oxygen passes into the blood.
- ☐ Air is warmed and moistened.

7. What does the diaphragm do when you breathe in?

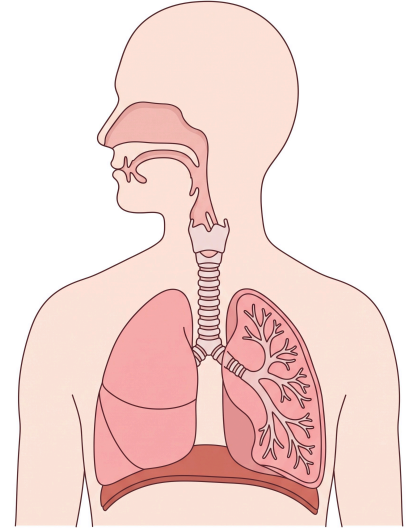
8. Why do your cells need oxygen? What waste gas do they make as they use it?

The Path of a Breath

These steps of breathing in are mixed up. Think about where the air goes first, next and last.

Part A. Number the steps from 1 to 7.

- ☐ The air travels down the trachea.
- ☐ The nasal cavity warms, moistens and filters the air.
- ☐ Oxygen passes from the air sacs into the blood.
- ☐ The two bronchi carry the air into the lungs.
- ☐ The bronchioles carry the air to the tiny air sacs.
- ☐ The air passes through the pharynx and then the larynx.
- ☐ The diaphragm tightens and flattens, and air is pulled in through the nose.



Part B. Answer the questions.

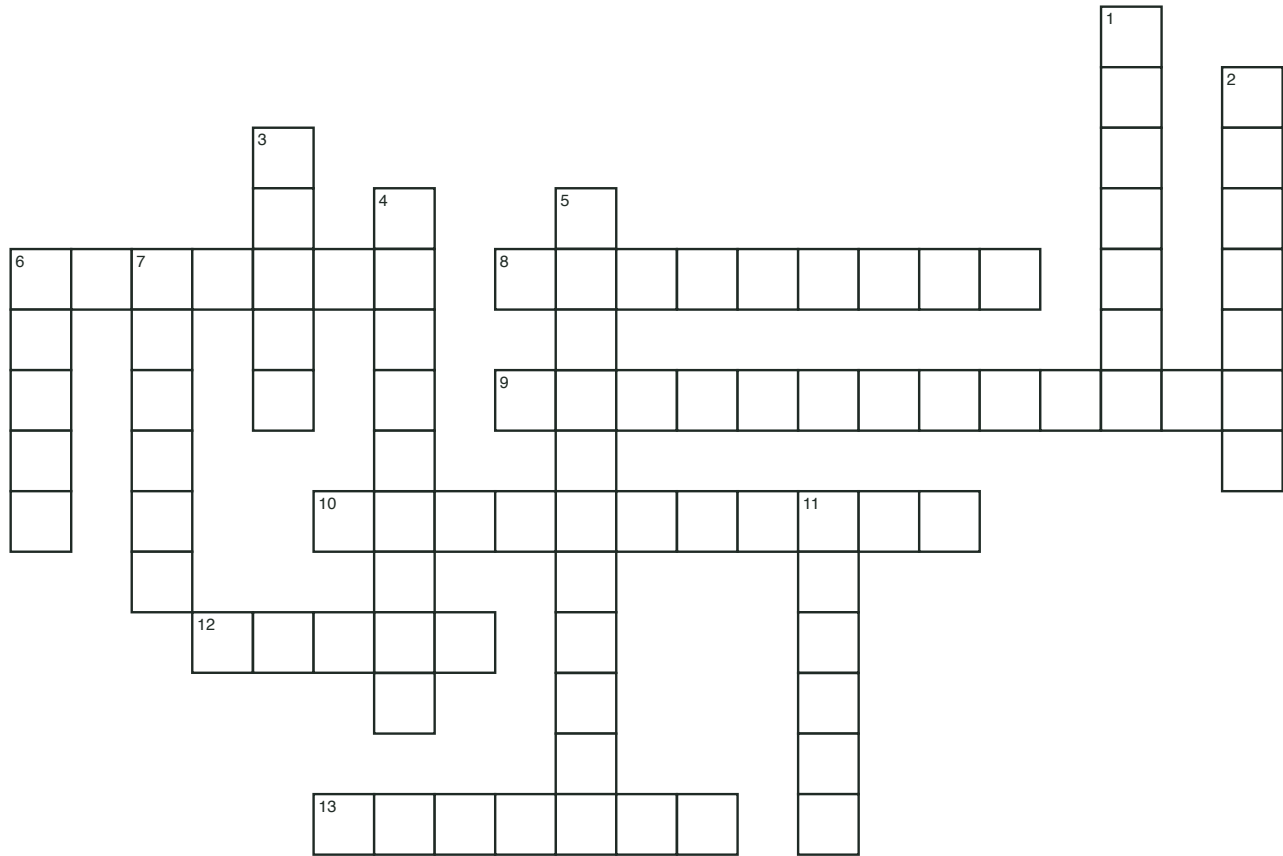
1. What are the tiny air sacs in the lungs called?

2. Carbon dioxide passes from the blood into the air sacs. What happens to it next?

3. What does the diaphragm do to make you breathe out?

Respiratory System Crossword

Read each clue. Write the answer in the puzzle, one letter in each box. Use the word bank if you get stuck.



ACROSS

6. Two large tubes that branch from the windpipe, one for each lung.
8. Stiff rings of this hold the windpipe open.
9. The waste gas you breathe out (2 words).
10. Smaller branching tubes deep inside the lungs.
12. The two main organs of breathing.
13. The throat. Both air and food pass through it.

DOWN

1. Tiny air sacs where oxygen passes into the blood.
2. The windpipe.
3. Sticky stuff in the nose that traps dust.
4. The dome-shaped muscle that powers breathing.
5. The space inside the nose that warms, moistens and filters air (2 words).
6. It carries oxygen to all of the body's cells.
7. The gas your cells need from the air.
11. The voice box.

Word bank

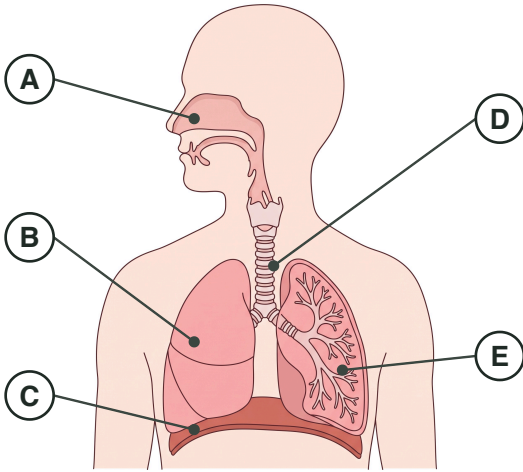
alveoli blood bronchi bronchioles carbon dioxide cartilage diaphragm
larynx lungs mucus nasal cavity oxygen pharynx trachea

Respiratory System Quiz

Score _____ / 13

Show what you know about the respiratory system.

Part A. This is the respiratory system. Write the name of each part.



A _____
B _____
C _____
D _____
E _____

Bronchioles · Diaphragm · Lungs · Nasal cavity · Trachea

Part B. Choose the best answer.

1. Which gas do your cells need from the air?

- ☐ Carbon dioxide
- ☐ Oxygen
- ☐ Nitrogen
- ☐ Steam

2. What is another name for the trachea?

- ☐ Voice box
- ☐ Throat
- ☐ Windpipe
- ☐ Air sac

3. Which part is the voice box?

- ☐ Pharynx
- ☐ Bronchi
- ☐ Diaphragm
- ☐ Larynx

4. Which tubes branch from the trachea, one to each lung?

- ☐ Bronchi
- ☐ Alveoli
- ☐ Vocal cords
- ☐ Blood vessels

5. Where does oxygen pass into the blood?

- ☐ In the nasal cavity
- ☐ In the trachea
- ☐ In the alveoli
- ☐ In the larynx

6. What happens when the diaphragm tightens?

- ☐ Air is pushed out.
- ☐ Air is pulled into the lungs.
- ☐ The trachea closes.
- ☐ The lungs get smaller.

Part C. Write your answer.

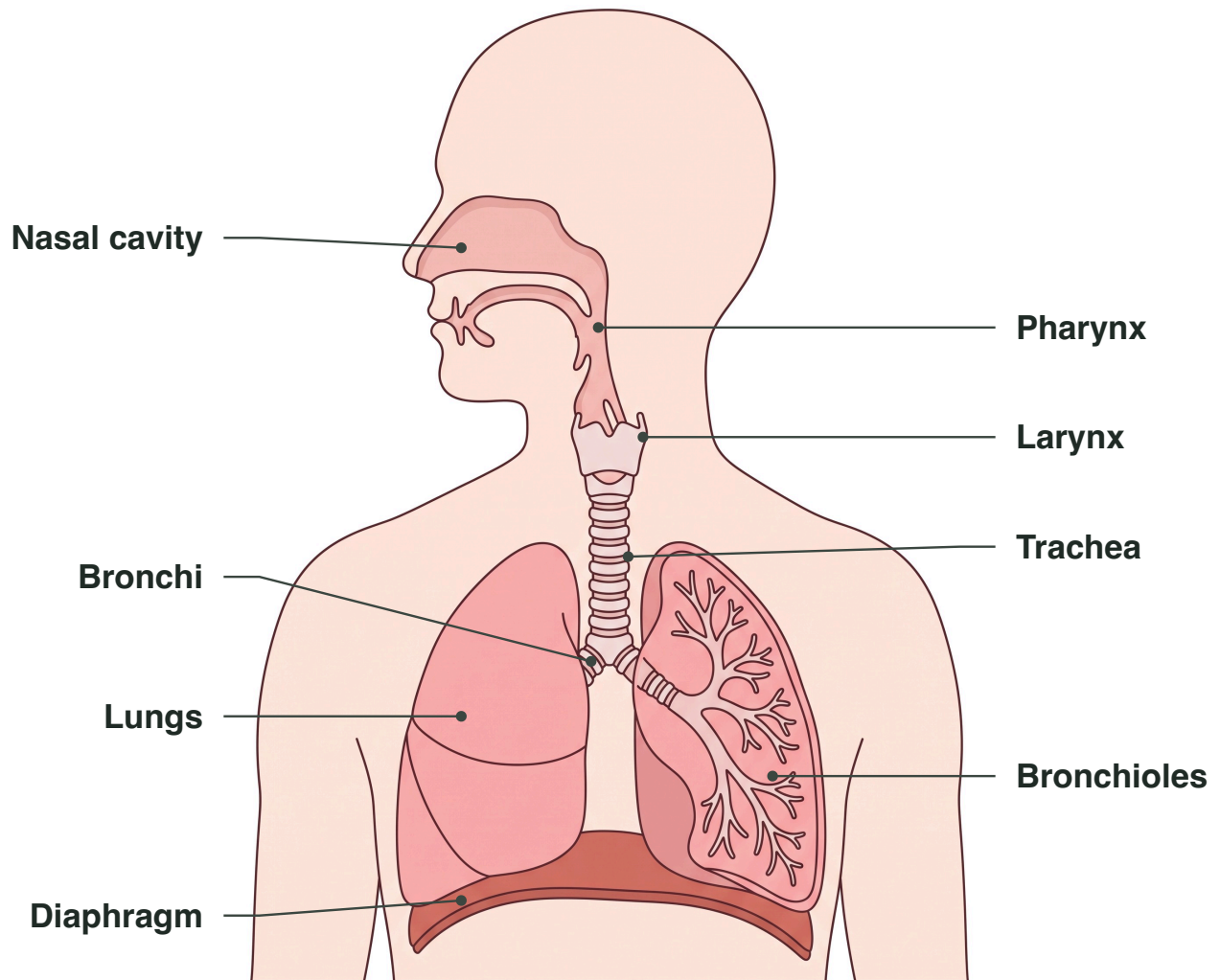
7. What does the nasal cavity do to the air you breathe in?

8. What happens to oxygen and to carbon dioxide in the alveoli?

Answer Keys

In the same order as the sheets.

The Respiratory System: Answer Key



Parts of the Respiratory System: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Write the part that does each job.

Word bank

Bronchi

Bronchioles

Diaphragm

Larynx

Lungs

Nasal cavity

Pharynx

Trachea

- | | |
|--|---------------------|
| 1. The windpipe. It carries air down toward the lungs. | <u>Trachea</u> |
| 2. The dome-shaped muscle that powers breathing. | <u>Diaphragm</u> |
| 3. The space inside the nose. It warms, moistens and filters air. | <u>Nasal cavity</u> |
| 4. Two large tubes that branch from the windpipe, one into each lung. | <u>Bronchi</u> |
| 5. The voice box. It holds the vocal cords. | <u>Larynx</u> |
| 6. The two main organs of breathing, where oxygen passes into the blood. | <u>Lungs</u> |
| 7. The throat. Both air and food pass through it. | <u>Pharynx</u> |
| 8. Smaller branching tubes deep inside the lungs. | <u>Bronchioles</u> |

Part B. Answer the questions.

- Three kinds of tubes carry air down from the larynx. List them from largest to smallest.
The trachea, then the bronchi, then the bronchioles.
- How is air different after it has passed through the nasal cavity?
It is warmer, moister and cleaner, because the nasal cavity warms, moistens and filters it.
- Which part on this sheet is a muscle? What does it do?
The diaphragm. It powers breathing.

How You Breathe: Answer Key

Answers are in green. Written answers will vary; these are examples.

1. What is this text mostly about?

- ☐ How the voice makes sounds
- ☐ Why exercise is good for you
- ☒ **How the body takes in oxygen and removes carbon dioxide**
- ☐ How blood moves around the body

2. What does the nasal cavity do to the air you breathe in?

- ☐ It adds oxygen to it.
- ☒ **It warms, moistens and filters it.**
- ☐ It pushes it out of the body.
- ☐ It turns it into carbon dioxide.

3. Why does the text call the pharynx a “shared passage”?

Both air and food pass through it.

4. Number the parts 1, 2 and 3 in the order air reaches them as you breathe in.

- 2** Bronchioles
- 3** Alveoli
- 1** Bronchi

5. What holds the trachea open?

- ☐ The vocal cords
- ☐ Sticky mucus
- ☐ The diaphragm
- ☒ **Rings of stiff cartilage**

6. What happens in the alveoli?

- ☐ Dust is trapped by mucus.
- ☐ Food and air are kept apart.
- ☒ **Oxygen passes into the blood.**
- ☐ Air is warmed and moistened.

7. What does the diaphragm do when you breathe in?

It tightens and flattens, so the chest gets bigger and air is pulled in.

8. Why do your cells need oxygen? What waste gas do they make as they use it?

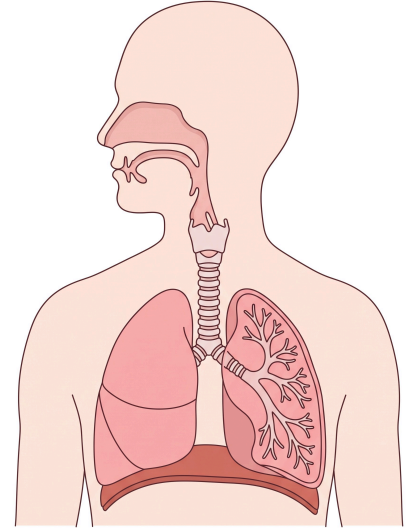
Cells need oxygen to release energy from food. As they use it they make carbon dioxide.

The Path of a Breath: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. Number the steps from 1 to 7.

- 4** The air travels down the trachea.
- 2** The nasal cavity warms, moistens and filters the air.
- 7** Oxygen passes from the air sacs into the blood.
- 5** The two bronchi carry the air into the lungs.
- 6** The bronchioles carry the air to the tiny air sacs.
- 3** The air passes through the pharynx and then the larynx.
- 1** The diaphragm tightens and flattens, and air is pulled in through the nose.



Part B. Answer the questions.

1. What are the tiny air sacs in the lungs called?

Alveoli.

2. Carbon dioxide passes from the blood into the air sacs. What happens to it next?

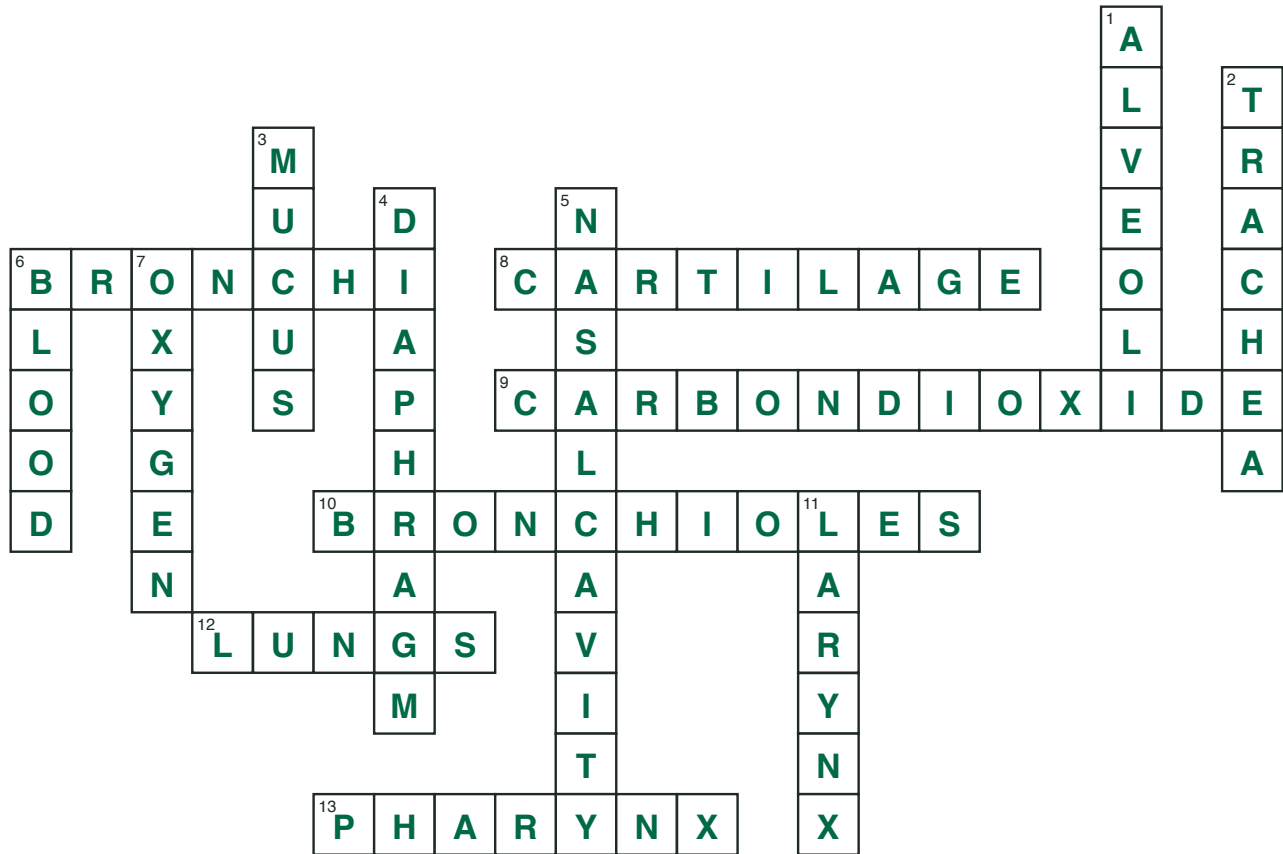
It leaves the body when you breathe out.

3. What does the diaphragm do to make you breathe out?

It relaxes and rises back into a dome, and air is pushed out of the lungs.

Respiratory System Crossword: Answer Key

Answers are in green.



ACROSS

- Two large tubes that branch from the windpipe, one for each lung.
- Stiff rings of this hold the windpipe open.
- The waste gas you breathe out (2 words).
- Smaller branching tubes deep inside the lungs.
- The two main organs of breathing.
- The throat. Both air and food pass through it.

DOWN

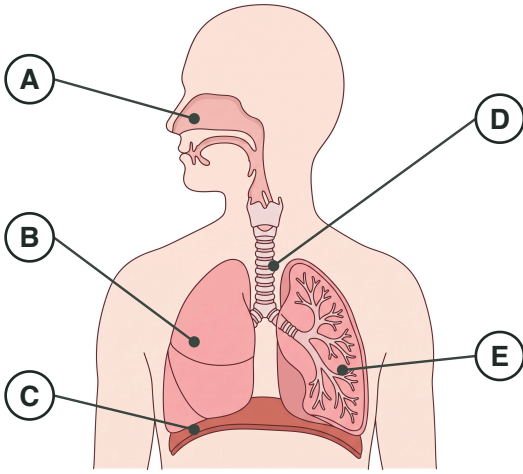
1. Tiny air sacs where oxygen passes into the blood.
2. The windpipe.
3. Sticky stuff in the nose that traps dust.
4. The dome-shaped muscle that powers breathing.
5. The space inside the nose that warms, moistens and filters air (2 words).
6. It carries oxygen to all of the body's cells.
7. The gas your cells need from the air.
11. The voice box.

Word bank alveoli blood bronchi bronchioles carbon dioxide cartilage diaphragm
larynx lungs mucus nasal cavity oxygen pharynx trachea

Respiratory System Quiz: Answer Key

Answers are in green. Written answers will vary; these are examples.

Part A. This is the respiratory system. Write the name of each part.



A **Nasal cavity**

B **Lungs**

C **Diaphragm**

D **Trachea**

E **Bronchioles**

Bronchioles · Diaphragm · Lungs · Nasal cavity · Trachea

Part B. Choose the best answer.

1. Which gas do your cells need from the air?

- ☐ Carbon dioxide
- ☒ **Oxygen**
- ☐ Nitrogen
- ☐ Steam

2. What is another name for the trachea?

- ☐ Voice box
- ☐ Throat
- ☒ **Windpipe**
- ☐ Air sac

3. Which part is the voice box?

- ☐ Pharynx
- ☐ Bronchi
- ☐ Diaphragm
- ☒ **Larynx**

4. Which tubes branch from the trachea, one to each lung?

- ☒ **Bronchi**
- ☐ Alveoli
- ☐ Vocal cords
- ☐ Blood vessels

5. Where does oxygen pass into the blood?

- ☐ In the nasal cavity
- ☐ In the trachea
- ☒ **In the alveoli**
- ☐ In the larynx

6. What happens when the diaphragm tightens?

- ☐ Air is pushed out.
- ☒ **Air is pulled into the lungs.**
- ☐ The trachea closes.
- ☐ The lungs get smaller.

Part C. Write your answer.

7. What does the nasal cavity do to the air you breathe in?

It warms, moistens and filters the air.

8. What happens to oxygen and to carbon dioxide in the alveoli?

Oxygen passes from the air sacs into the blood. Carbon dioxide passes from the blood into the air sacs and leaves when you breathe out.