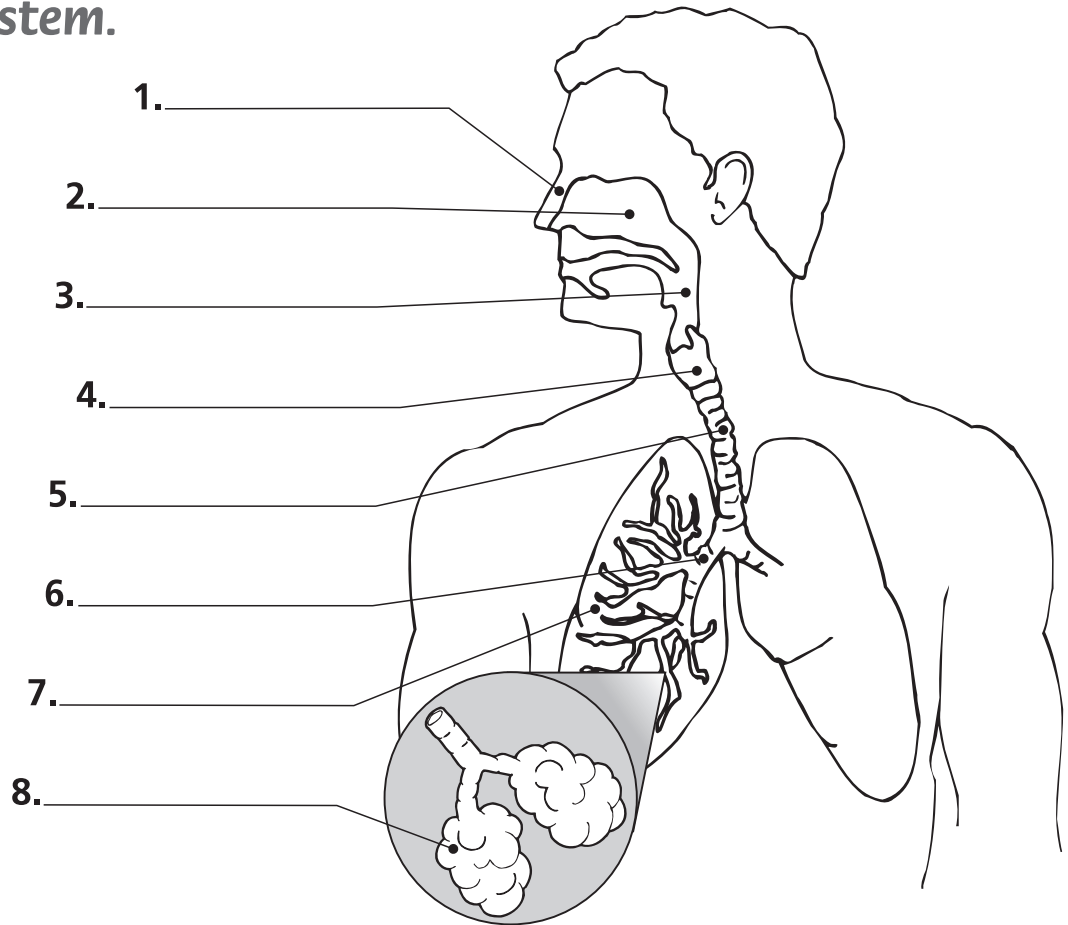


BIOLOGY

The respiratory system.

1 Label the picture.

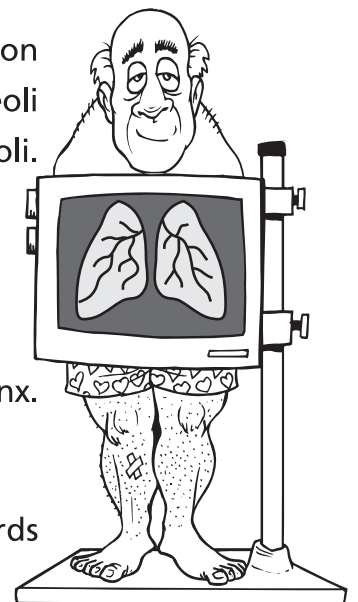
- trachea
- larynx
- nose
- bronchi
- lungs
- nasal cavity
- alveoli
- pharynx



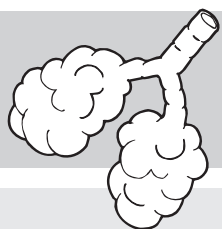
2 Order the text. Number the paragraphs.

The main function of the respiratory system is gas exchange. Gas exchange occurs at the alveoli which are in the lungs. Air moves through the body in the following order:

- The air goes through the trachea. The trachea is a tube that goes from the larynx to the bronchi.
- In the lungs, the air goes into the alveoli. There are about 700 million alveoli. Gas exchange occurs in the alveoli: oxygen goes from the alveoli into the blood and carbon dioxide goes from the blood into the alveoli.
- When we exhale, the air goes out of the lungs and carries the carbon dioxide out of the body.
- The air goes through the pharynx. The pharynx is part of the respiratory and digestive systems. Food and air go through the pharynx.
- When we inhale, air goes through the nose and the nasal cavity.
- After the pharynx, the air goes through the larynx. The vocal cords are in the larynx. The vocal cords make sounds.
- The air goes into the bronchi. The bronchi take the air into the lungs.



The respiratory system.



Aim

- To study the human respiratory system.

Language focus

Key vocabulary: *respiratory system, trachea, larynx, nose, bronchi, lungs, nasal cavity, alveoli, pharynx, gas exchange, throat, vocal cords, blood, digestive system, breathe in, breathe out, inhale, exhale.*

Key language: *The air goes through the trachea. The trachea is a tube that goes from the larynx to the bronchi. The bronchi take the air into the lungs. Oxygen goes from the alveoli into the blood.*

Materials

- Worksheet.
- Picture/poster showing the human respiratory system.

Warm-up

- Ask the pupils to do some physical exercise in the classroom, eg, *Jump five times, touch your toes, jump three times, touch your head, jump as high as you can.* Ask the pupils *What happens when we do exercise? We need more air and we breathe faster.*

Completing the Worksheet

Activity 1

- Ask the pupils to stand up. Tell them to breathe in and out slowly and deeply. Encourage them to feel their lungs and notice what happens. *Air goes into the nose and down the throat into the lungs. Then the air comes out again. The lungs expand and contract when we breathe.*
- Explain that *the air we breathe in is not the same as the air we breathe out* (make sure the pupils understand *breathe in* and *breathe out*). *The air we breathe in has got more oxygen than the air we breathe out. The air we breathe out has got more carbon dioxide.* The air we breathe in contains 21% oxygen and 0.03% carbon dioxide (CO₂). The air we breathe out contains 14% oxygen and 4% carbon dioxide.

Explain that *We need oxygen from the air.*

When we breathe in we take the oxygen that is in the air and we breathe out carbon dioxide from the blood. This is called gas exchange.

Write *respiratory system* on the board. Explain that *the main function of the respiratory system is gas exchange.*

- Use a poster or draw a simple version of the respiratory system (see the illustration in Activity 1 on the worksheet). Explain the respiratory process and name the different parts. Encourage the pupils to repeat the different parts after you, eg, *We breathe in, or inhale. Air goes through the nose and into the nasal cavity. It goes through the pharynx and the larynx. Then the air goes through the trachea. The trachea is a long tube. The bronchi are small tubes. They take the air into the lungs. In the lungs there are millions of alveoli. Gas exchange takes place in the alveoli. Oxygen goes from the alveoli into the blood. Carbon dioxide goes from the blood into the alveoli. Then we breathe out, or exhale.*
- The pupils label the illustration in Activity 1.

Answers: 1-nose; 2-nasal cavity; 3-pharynx; 4-larynx; 5-trachea; 6-bronchi; 7-lungs; 8-alveoli

Extension activity

- Divide the pupils into groups of four. Tell each group to cut up a sheet of A4 paper into eight pieces and write the names of the eight different parts of the respiratory system (see Activity 1) on them. Bring a pupil to the front of the class with the eight pieces of paper. Shuffle the pieces of paper and ask the pupil to put them in order. Encourage the pupil to describe the respiratory process, eg, *First the nose. The air goes through the nose and the nasal cavity. Then it goes through the pharynx.* etc.
- Encourage the rest of the class to help the pupil at the front.
- Pupils repeat the activity in the same way in their groups.

Activity 2

- Write some true/false sentences on the board. Ask the pupils to copy the sentences in their notebooks and discuss in small groups whether they are true or false. Elicit feedback from the

class and correct the false sentences, eg, *The respiratory system begins in the nose.* (T) *The vocal cords are in the nasal cavity.* (F) *The trachea is a tube that connects the throat and the lungs.* (T) *There are two alveoli in the lungs.* (F) *Oxygen goes from the alveoli into the blood.* (T)

- Ask the pupils to put the sentences in Activity 2 in the correct order.
- Check the answers and ask the pupils to write the ordered text in their notebooks.

Answers: 4 – 6 – 7 – 2 – 1 – 3 – 5:

- 1 When we inhale, air goes through the nose and the nasal cavity.
- 2 The air goes through the pharynx. The pharynx is part of the respiratory and digestive systems. Food and air go through the pharynx.
- 3 After the pharynx, the air goes through the larynx. The vocal cords are in the larynx. The vocal cords make sounds.
- 4 The air goes through the trachea. The trachea is a tube that goes from the larynx to the bronchi.

- 5 The air goes into the bronchi. The bronchi take the air into the lungs.
- 6 In the lungs, the air goes into the alveoli. There are about 700 million alveoli. Gas exchange occurs in the alveoli: oxygen goes from the alveoli into the blood and carbon dioxide goes from the blood into the alveoli.
- 7 When we exhale, the air goes out of the lungs and carries the carbon dioxide out of the body.

Extension activity

Divide the pupils into small groups. Write the different stages of the respiratory process on different cards. Give each group a set of cards with the different stages. Encourage the pupils to put their cards in order. Check answers. Rearrange the pupils in new groups and repeat the activity.