

# Natural Science Exam

## Part I: test I

### Digestion and respiration

TEST

Name \_\_\_\_\_ Date \_\_\_\_\_

**1** We obtain all the energy and building materials we need through...

- a. digestion.                                      b. nutrition.                                      c. respiration.

**2** Food contains the following nutrients: ...

- a. proteins, carbohydrates, fats, vitamins and minerals, and fibre.  
b. proteins, carbohydrates, fats, vitamins and minerals, and energy.  
c. proteins, carbohydrates, fats, vitamins and minerals, and water.

**3** The processes involved in nutrition are...

- a. digestion, respiration, circulation and excretion.  
b. digestion, respiration, circulation and growth.  
c. digestion, reproduction, circulation and excretion.

**4** The helper glands include...

- a. the salivary glands, the mouth and the pharynx.  
b. the salivary glands, the stomach and the oesophagus.  
c. the salivary glands, the liver and the pancreas.

**5** The bolus is...

- a. a portion of food before it enters the mouth.  
b. a milky liquid produced in the small intestine.  
c. the mixture of food and saliva produced by chewing.

**6** Villi in the small intestine help to...

- a. break down the bolus.                      b. absorb nutrients.                      c. eliminate waste.

**7** A healthy diet should include foods high in...

- a. fibre.    b. fats.    c. sugar.

**8** The air passageways in the respiratory system are...

- a. the nostrils, pharynx, larynx, trachea, lungs and bronchioles.
- b. the nostrils, pharynx, larynx, trachea, bronchi and bronchioles.
- c. the nostrils, pharynx, larynx, trachea, bronchi and air sacs.

**9** Gas exchange takes place in the...

- a. bronchi.
- b. air sacs.
- c. bronchioles.

**10** You can keep your respiratory system healthy by...

- a. eating carbohydrates.
- b. doing homework.
- c. drinking water.

## Part 2: Exam

### 1 Match the photos to the nutrients.

vitamins and minerals - carbohydrates - proteins - fats

A



B



C



D




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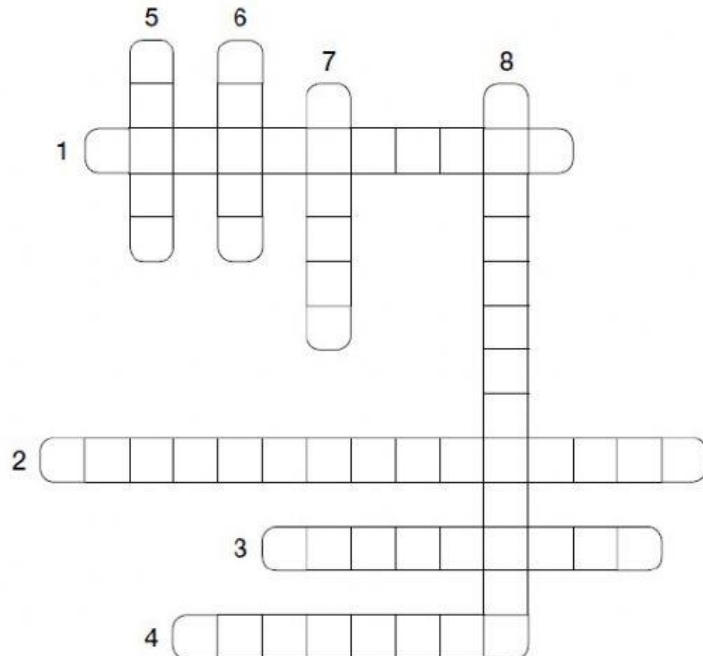
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### 1 Complete the crossword about the circulatory system.

1. They allow nutrients and oxygen to pass into the body cells.
2. They protect the body from germs and disease (three words).
3. They help to stop bleeding from wounds.
4. They carry blood away from the heart.
5. It pumps blood around the body.
6. They carry blood back to the heart.
7. It transports nutrients and waste around the body.
8. They carry oxygen from the lungs to all body cells (three words).



- 2** Complete the four processes of nutrition and their corresponding systems, and match. Then, answer the question.

|           |                    |
|-----------|--------------------|
| digestion |                    |
|           | circulatory system |
| excretion |                    |
|           | respiratory system |

- Where else does excretion take place? \_\_\_\_\_

- 3** Complete the texts about circulation.

#### Pulmonary circulation

Blood goes to the \_\_\_\_\_ to expel \_\_\_\_\_, and to obtain \_\_\_\_\_ and bring it back to the \_\_\_\_\_.

#### Systemic circulation

Blood with \_\_\_\_\_ and \_\_\_\_\_ goes to all body cells and returns to the \_\_\_\_\_ with \_\_\_\_\_ and other \_\_\_\_\_ products.

- 3** Complete the diagrams about the stages of digestion. Then, write where each stage takes place.

|   |       |
|---|-------|
| food + <u>saliva</u> ► bolus                                    | _____ |
| bolus + _____ ► chyme   | _____ |
| chyme + intestinal juices + _____<br>+ pancreatic juice ► _____ | _____ |

- 3** Use the words to complete the sentences. Then, write *P* (pulmonary circulation) or *S* (systemic circulation).

gas exchange - nutrients - oxygen - lungs - carbon dioxide

- a. It obtains the \_\_\_\_\_ the body cells need.
- b. Blood with \_\_\_\_\_ and other waste products returns to the heart.
- c. It allows for \_\_\_\_\_ in the lungs.
- d. Blood with \_\_\_\_\_ and oxygen travels to all body cells.
- e. It allows for carbon dioxide to be expelled through the \_\_\_\_\_.

☐  
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- 4** Read and write *T* (true) or *F* (false).

- a. Fibre is found in foods that come from animals.
- b. Eating different foods provides a variety of nutrients.
- c. Having several meals a day is a healthy habit.
- d. We should eat foods that are high in fats and sugar.

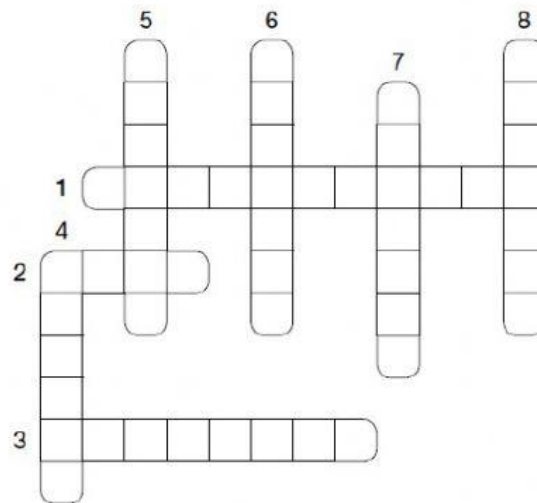
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- 5** Write the parts of the excretory system.

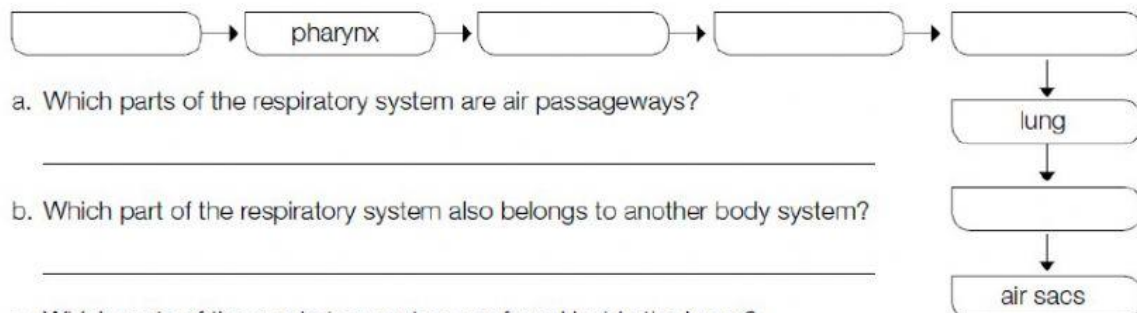
- a. They produce urine and return nutrients to the blood. \_\_\_\_\_
- b. They carry urine from the kidneys to the bladder. \_\_\_\_\_
- c. It stores urine until it leaves the body. \_\_\_\_\_
- d. Urine leaves the body through this tube. \_\_\_\_\_

**5** Complete the crossword about the respiratory system.

1. Very small air passageways that lead to the air sacs.
2. Organ which contains bronchioles and air sacs.
3. Air passageways where air enters the body when we inhale.
4. Air passageway between the pharynx and the trachea.
5. Air passageway shared with the digestive system.
6. Air passageway which is divided into two branches at the lungs.
7. Air passageways which take the air to each lung.
8. Moist surfaces in the lungs where gas exchange takes place (two words).



**5** Complete the diagram to show the path air travels through when we inhale. Answer the questions.



a. Which parts of the respiratory system are air passageways?

\_\_\_\_\_

b. Which part of the respiratory system also belongs to another body system?

\_\_\_\_\_

c. Which parts of the respiratory system are found inside the lungs?

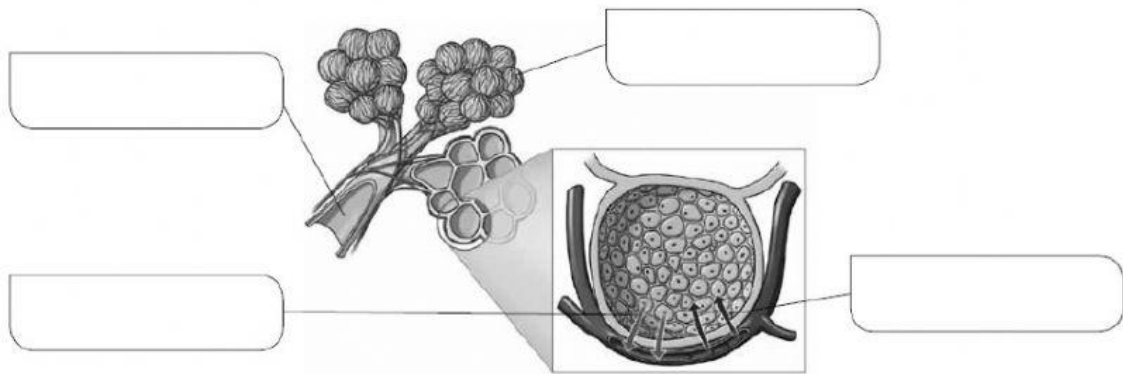
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d. Where does gas exchange take place?

\_\_\_\_\_

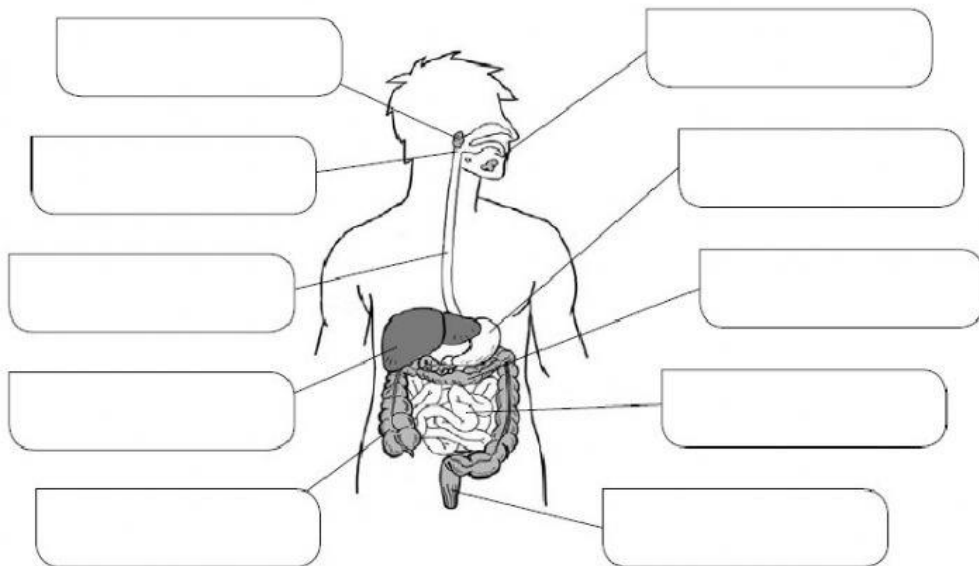


- 6** Label the illustration with these words: *bronchiole*, *air sac*, *oxygen*, *carbon dioxide*.



- 3** Label the diagram of the digestive system

mouth - large intestine - liver - anus - oesophagus - small intestine -  
pancreas - salivary glands - stomach - pharynx



## Part 3: test 2

- 1** The circulatory system consists of blood, blood vessels and the...
  - a. lungs.
  - b. kidneys.
  - c. heart.
- 2** The components of blood are plasma, red blood cells, white blood cells and...
  - a. fluid.
  - b. platelets.
  - c. water.
- 3** Blood vessels include...
  - a. arteries, veins and capillaries.
  - b. arteries, veins and atria.
  - c. arteries, veins and ventricles.
- 4** Blood enters the heart through the...
  - a. chambers.
  - b. atria.
  - c. ventricles.
- 5** The circulatory system consists of...
  - a. a single circuit.
  - b. two connected circuits.
  - c. two separate circuits.
- 6** Pulmonary circulation allows for...
  - a. blood to release carbon dioxide and obtain oxygen in the lungs.
  - b. blood to release oxygen and obtain carbon dioxide in the lungs.
  - c. blood that is high in oxygen to reach the capillaries of each organ.
- 7** The exchange of nutrients, gases and waste products happens in the...
  - a. veins.
  - b. capillaries.
  - c. arteries.
- 8** Excretion takes place in...
  - a. the excretory system, the circulatory system and the sweat glands.
  - b. the excretory system, the respiratory system and the digestive system.
  - c. the excretory system, the respiratory system and the sweat glands.
- 9** The parts of the excretory system are...
  - a. the kidneys, the ureters, the bladder and the urethra.
  - b. the lungs, the ureters, the bladder and the urethra.
  - c. the sweat glands, the ureters, the bladder and the urethra.
- 10** For a healthy excretory system, we should drink plenty of water and...
  - a. get at least ten hours of sleep.
  - b. keep our skin clean.
  - c. avoid noisy parts of the city.