



Cizí jazyk – Anglický jazyk 1

PAANJ11111/B2

ZZANJ11111/B2

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The musculoskeletal System

Choose a term and explain it to your partner:

SPINE – JOINTS – SKELETON –
MUSCLE – LIGAMENT – CRANIUM –
CARTILAGE – TENDON – FASCIA –
CONNECTIVE TISSUES – BONES

The musculoskeletal System

Choose a term and explain it to your partner:

SPINE – a series of vertebrae extending from the skull to the small of the back, enclosing the spinal cord and providing support for the thorax and abdomen; the backbone.

JOINTS – a structure in the human or animal body at which two parts of the skeleton are fitted together

SKELETON – an internal or external framework of bone, cartilage, or other rigid material supporting or containing the body of an animal or plant.

MUSCLE – a band or bundle of fibrous tissue in a human or animal body that has the ability to contract, producing movement in or maintaining the position of parts of the body.

LIGAMENT – a short band of tough, flexible fibrous connective tissue which connects two bones or cartilages or holds together a joint.

CRANIUM – the skull, especially the part enclosing the brain.

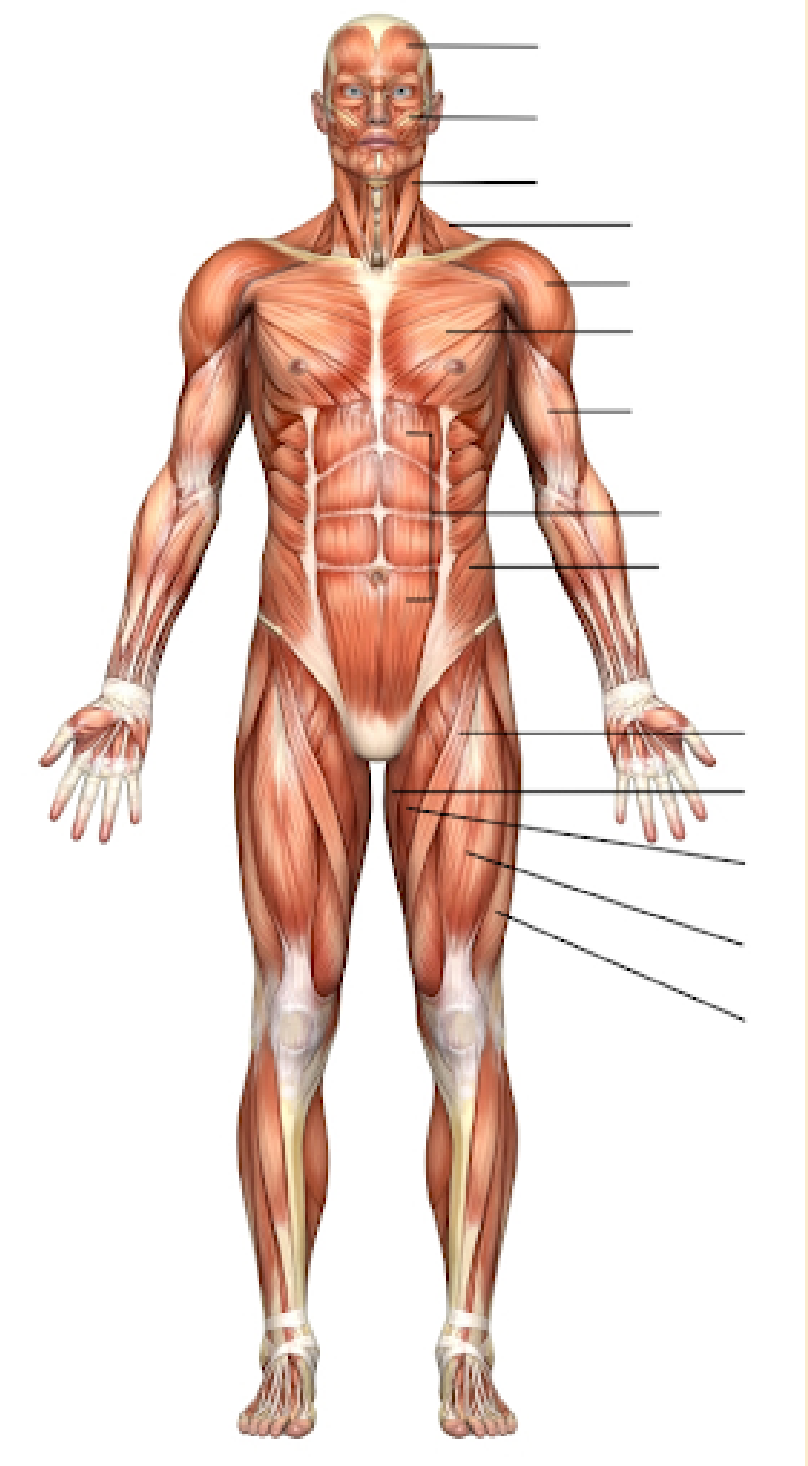
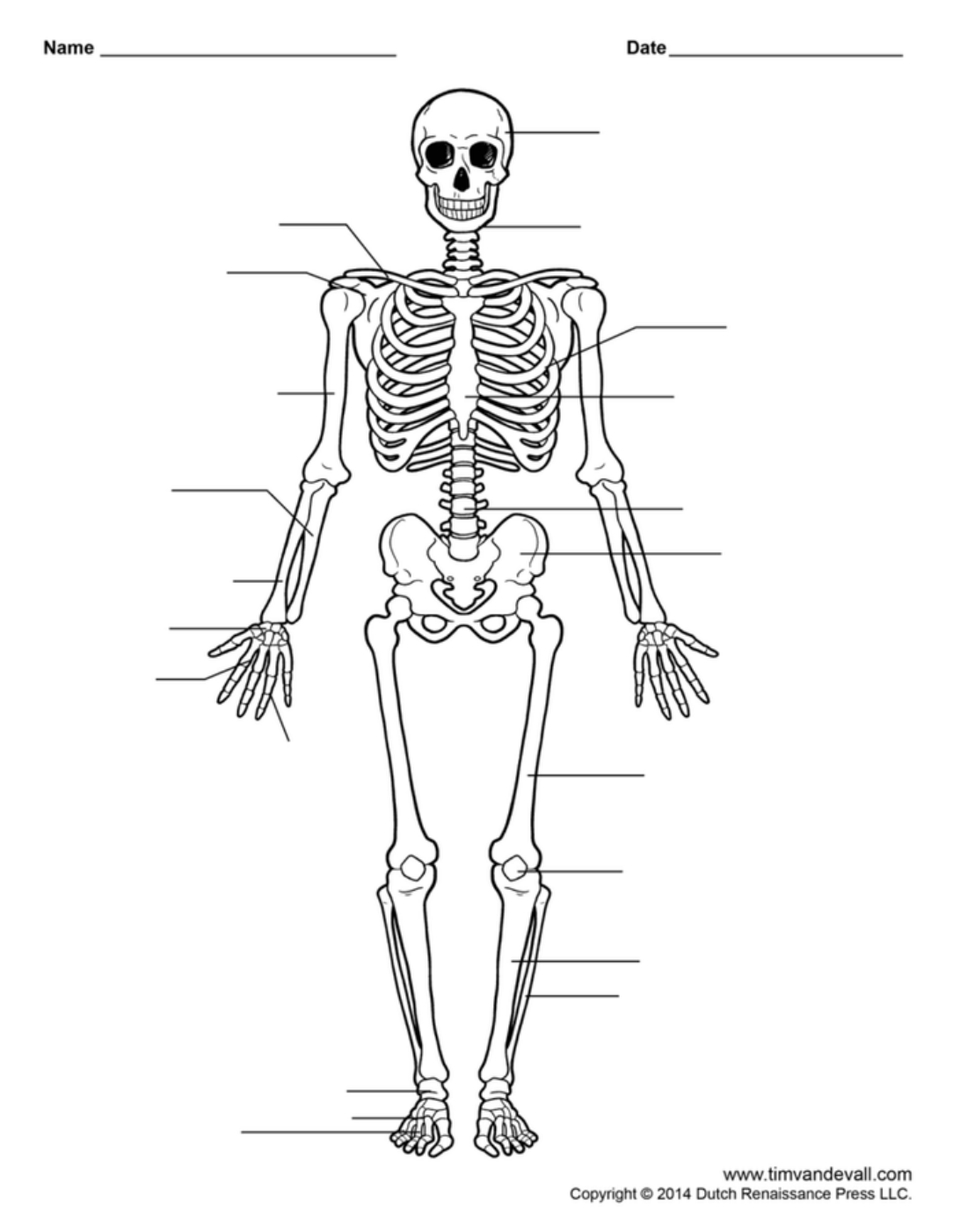
CARTILAGE – firm, flexible connective tissue found in various forms in the larynx and respiratory tract, in structures such as the external ear, and in the articulating surfaces of joints. It is more widespread in the infant skeleton, being replaced by bone during growth.

FASCIA – connective tissue that surrounds and holds every organ, blood vessel, bone, nerve fiber and muscle in place

TENDON – tissue attaching a muscle to a bone.

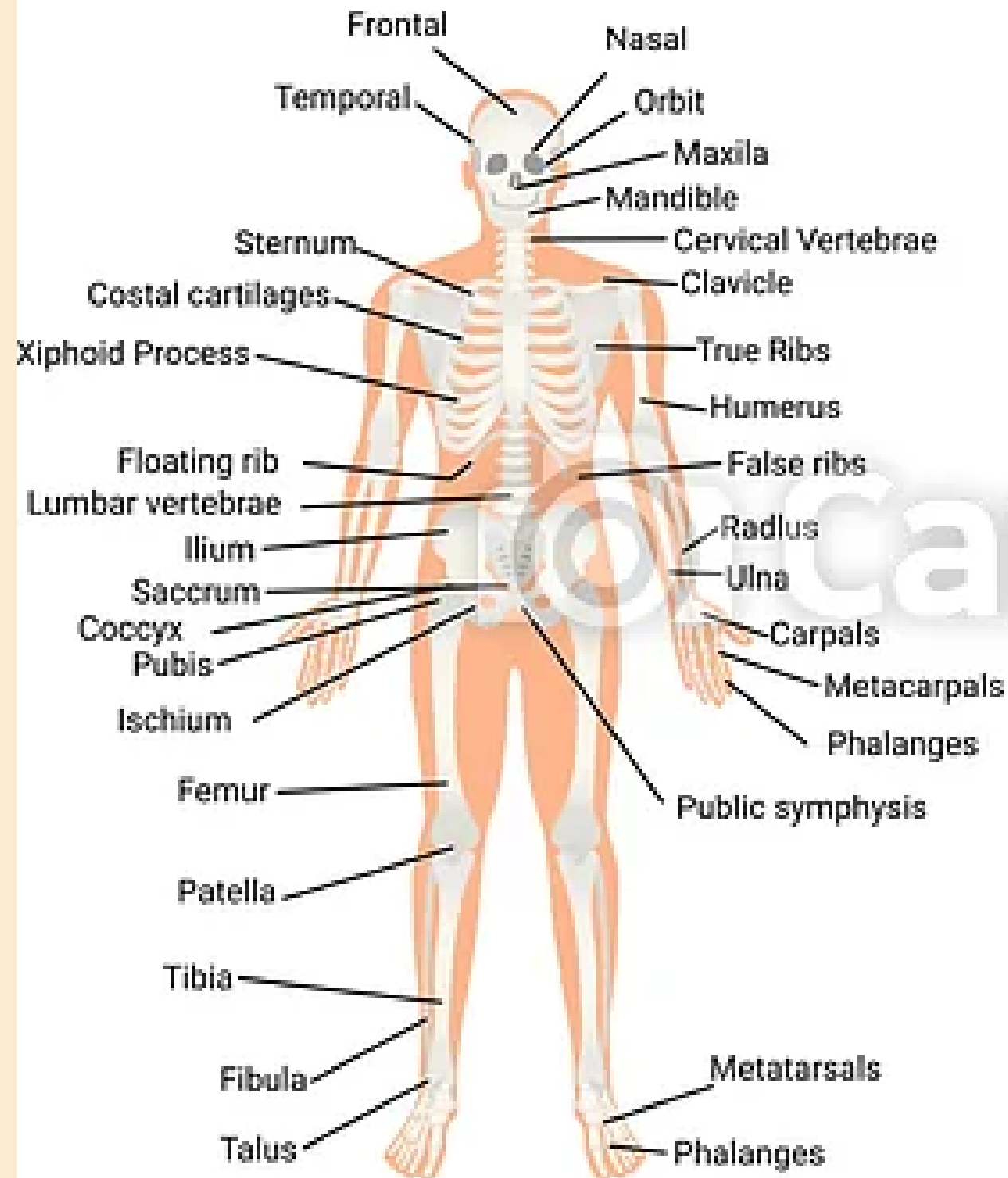
The musculoskeletal System

Try and name as many as you can :-)

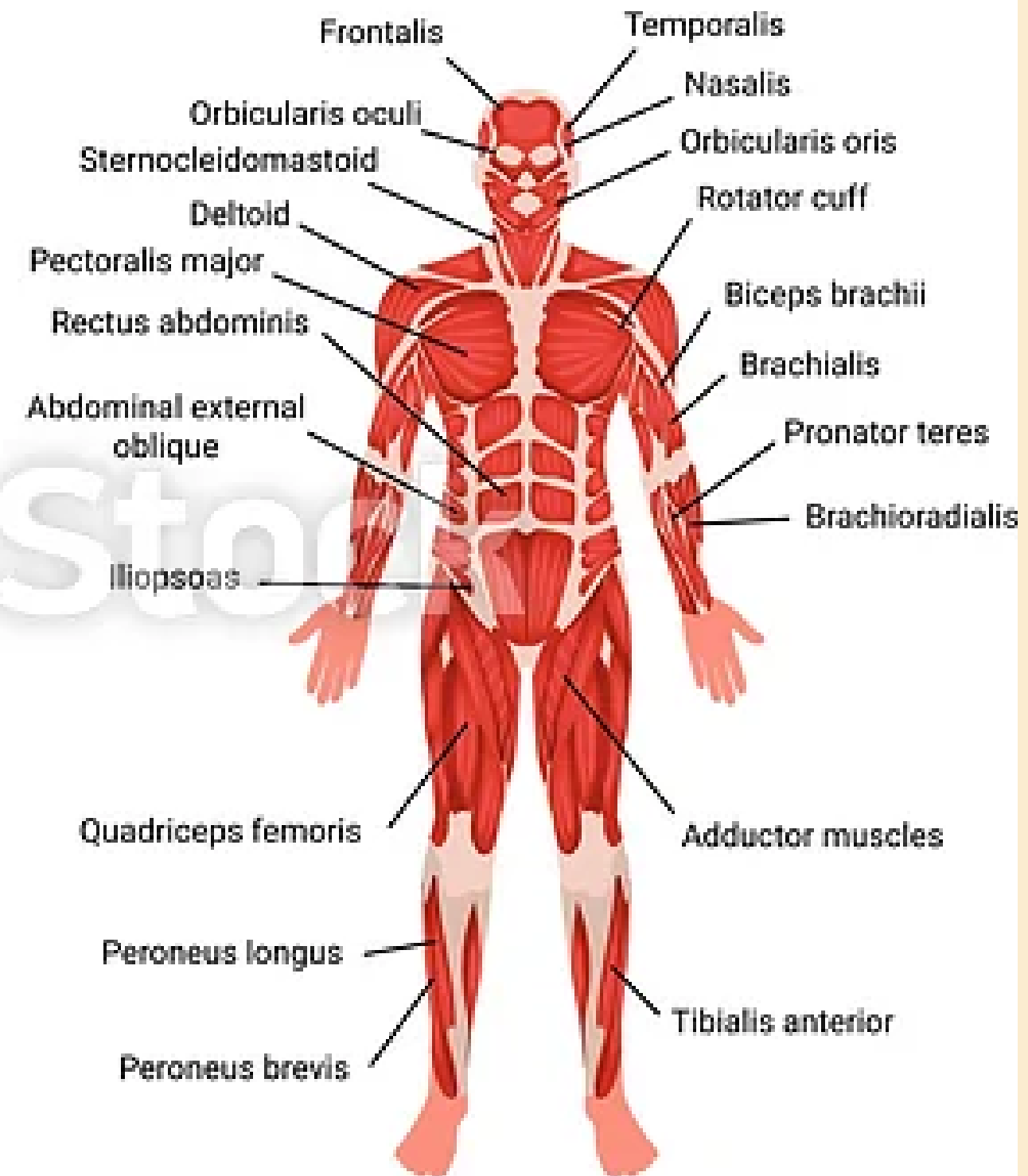


The musculoskeletal System

SKELETAL SYSTEM



MUSCULAR SYSTEM



The musculoskeletal System

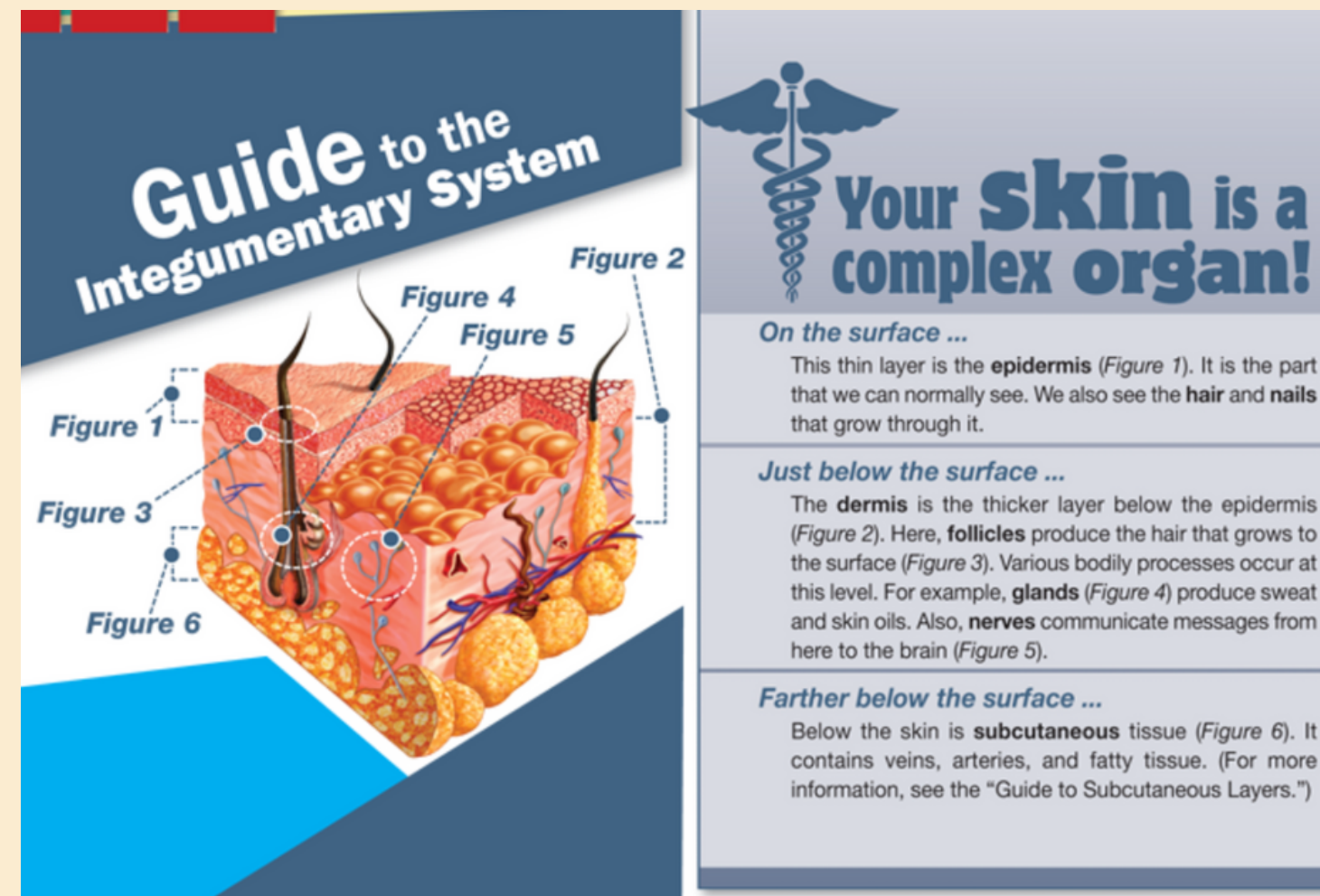
Watch the video and decide if given statements are TRUE or FALSE:

1. Skeletal muscles are attached via tendons to our bones. T / F
2. Smooth muscle can be only found in the heart. T / F (Cardiac muscle, smooth muscle - intestine, uterus)
3. All the motions in our body are governed by muscular system. T / F (sperm cells, hair-like cilia in our airways, certain white blood cells)
4. Buccinator is a muscle which attaches your cheek to your teeth. T / F
5. Our body contain of two types of muscle fibre - slow-twitch and fast- twitch. T / F
6. Fast-twitch muscles maintain our muscles all day and are found in our back. T / F
Slow-twitch muscles
7. The heat is spread around the body via nerves. T / F via heart and blood vessels

Integumentary system

Read the article and answer the questions:

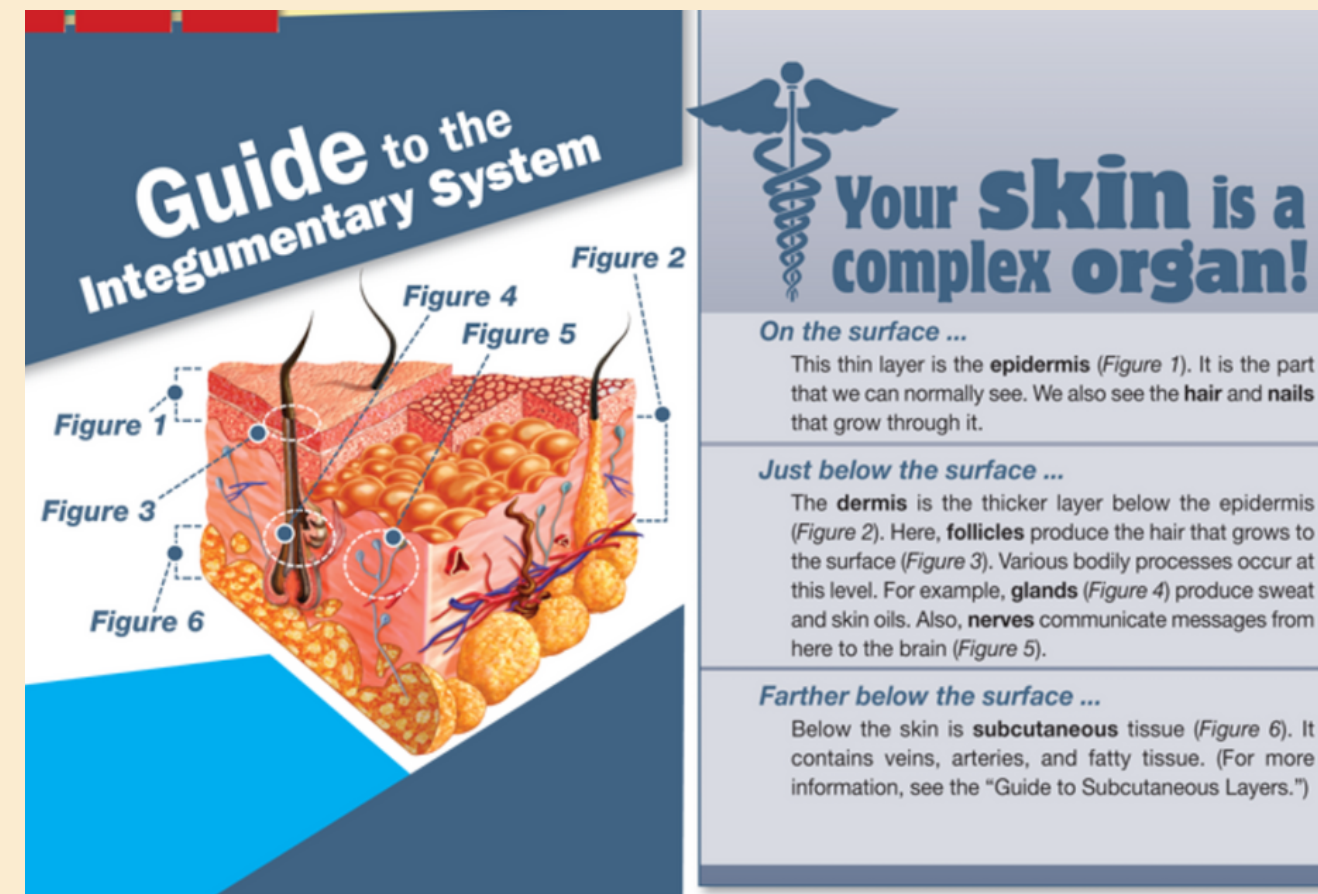
1. What are the major layers of skin?
2. What is the role of the integumentary /In'teg.jə.mən.tər.i/ system?



Integumentary system

Read the text again and decide if the statements are TRUE or FALSE.

1. The poster reviews multiple layers of skin. TRUE
2. Sweat glands are present in the epidermis. FALSE
3. Subcutaneous /,sʌb.kju'teɪ.ni.əs/ tissue contains veins and arteries. TRUE



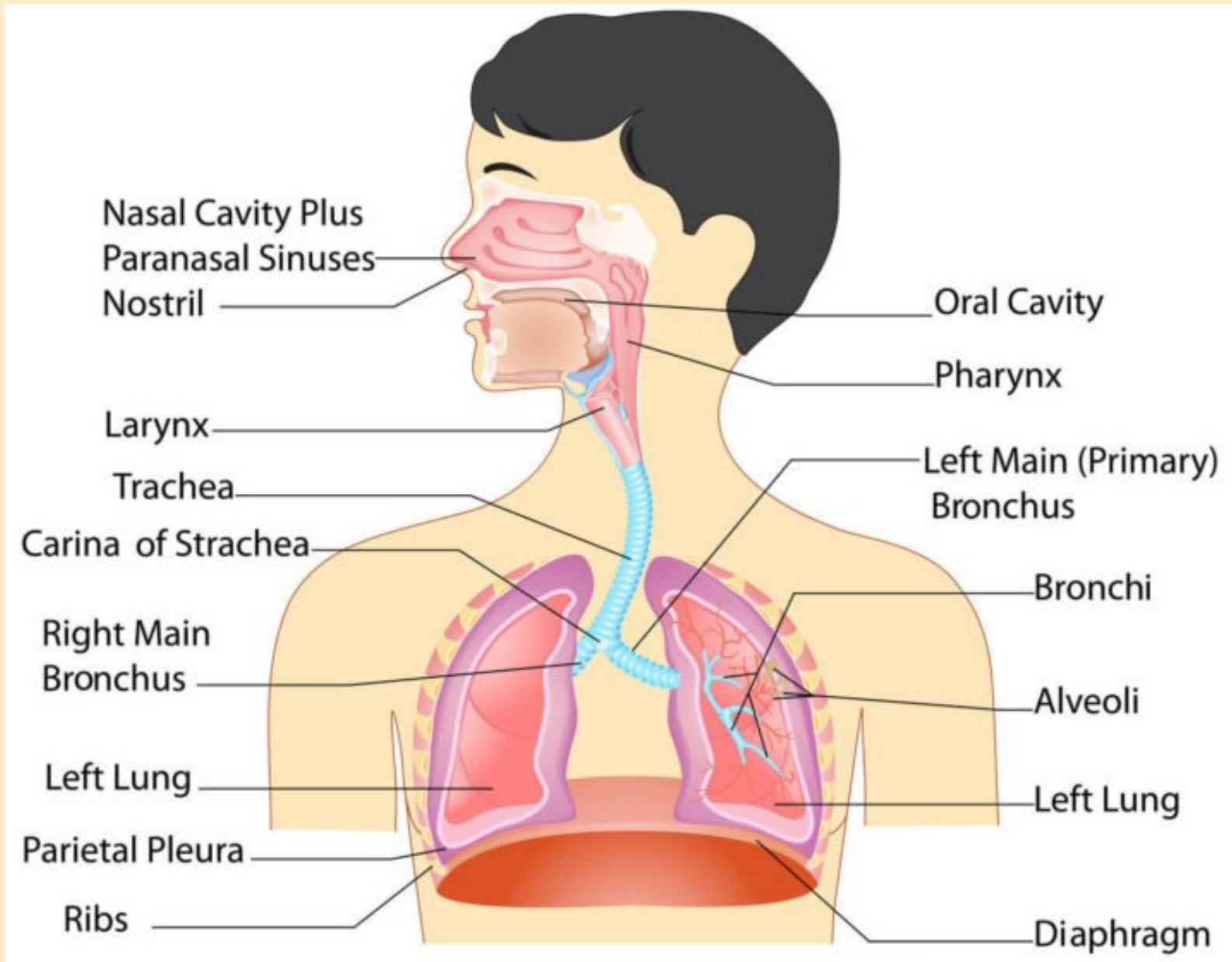
Integumentary system

Match the words with the definitions:

FOLLICLE - INTEGUMENTARY SYSTEM - ORGAN - NERVE - SUBCUTANEOUS - EPIDERMIS

1. existing just beneath the skin **SUBCUTANEOUS**
2. part of a system that perceives sensations and sends signals to the brain **NERVE**
3. an internal or external part of the body that performs a particular function **ORGAN**
4. the network of body parts that protects the inside of the body, prevents water loss, and regulates temperature **INTEGUMENTARY SYSTEM**
5. a very small hole in the skin from which hair grows **FOLLICLE**
6. the outer layer of skin that makes up the surface of the body **EPIDERMIS**
7. A(n) **GLAND** might produce sweat, or it might produce hormones.
8. The **DERMIS** is the layer just above the subcutaneous tissue.

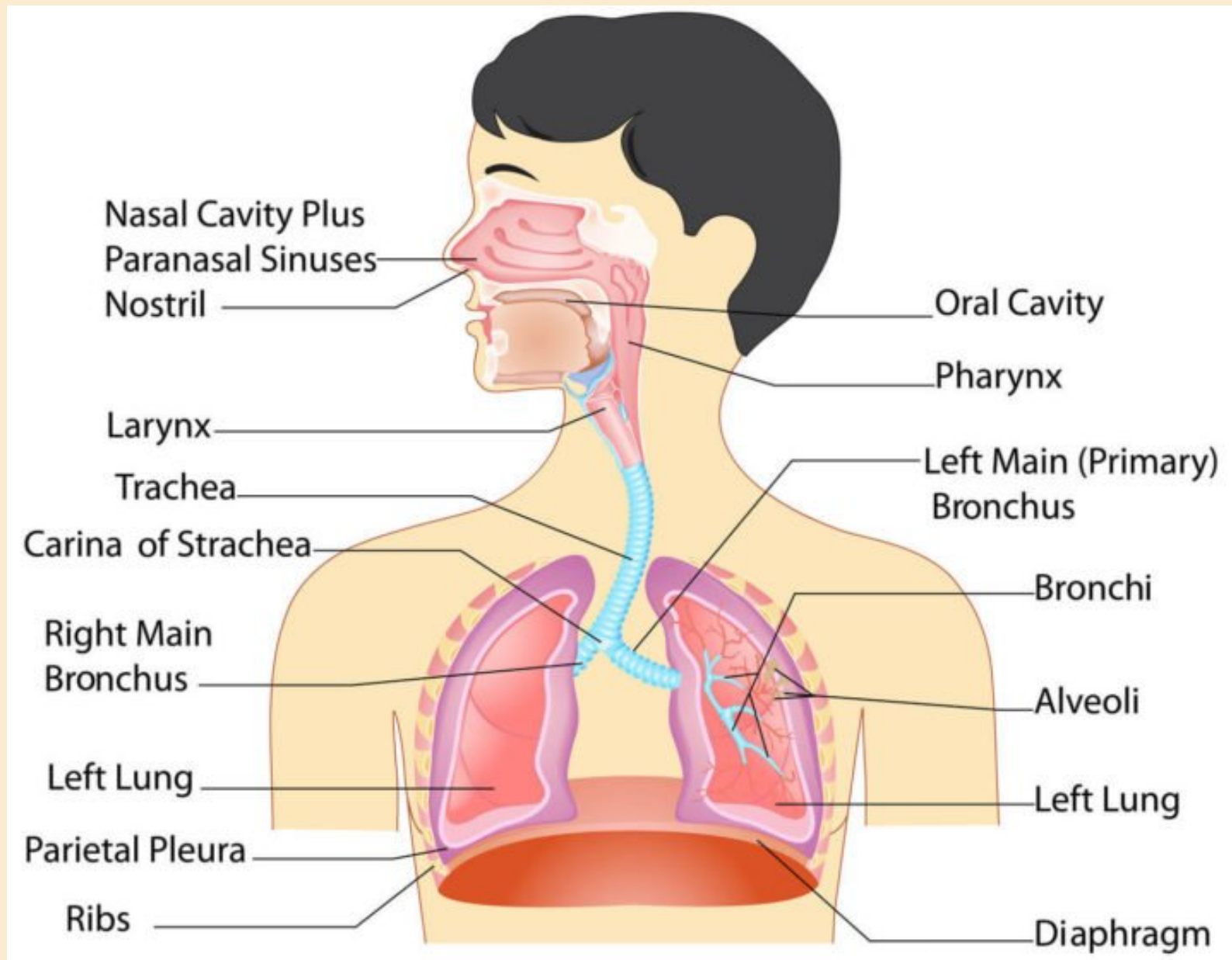
Respiratory system



1. What components make up the respiratory track?
2. How does air reach lungs?

Respiratory system

How does air reach lungs?



Respiration occurs as air enters the respiratory tract. The pharynx */ˈfær.ɪŋks/* is the opening that controls the movement of air. It consists of two main components: the oropharynx, or the opening in the mouth, and the nasopharynx */ˌneɪ.zə/*, or the opening in the nose. Once air enters the pharynx, it travels down to the larynx. This opening closes if it detects any unwanted substances in the airway. After that, the trachea */trəˈkiː.ə/* carries the air to bronchi *ˈbrɒŋ.kai/*. Then, the air enters the lungs.

Respiratory system

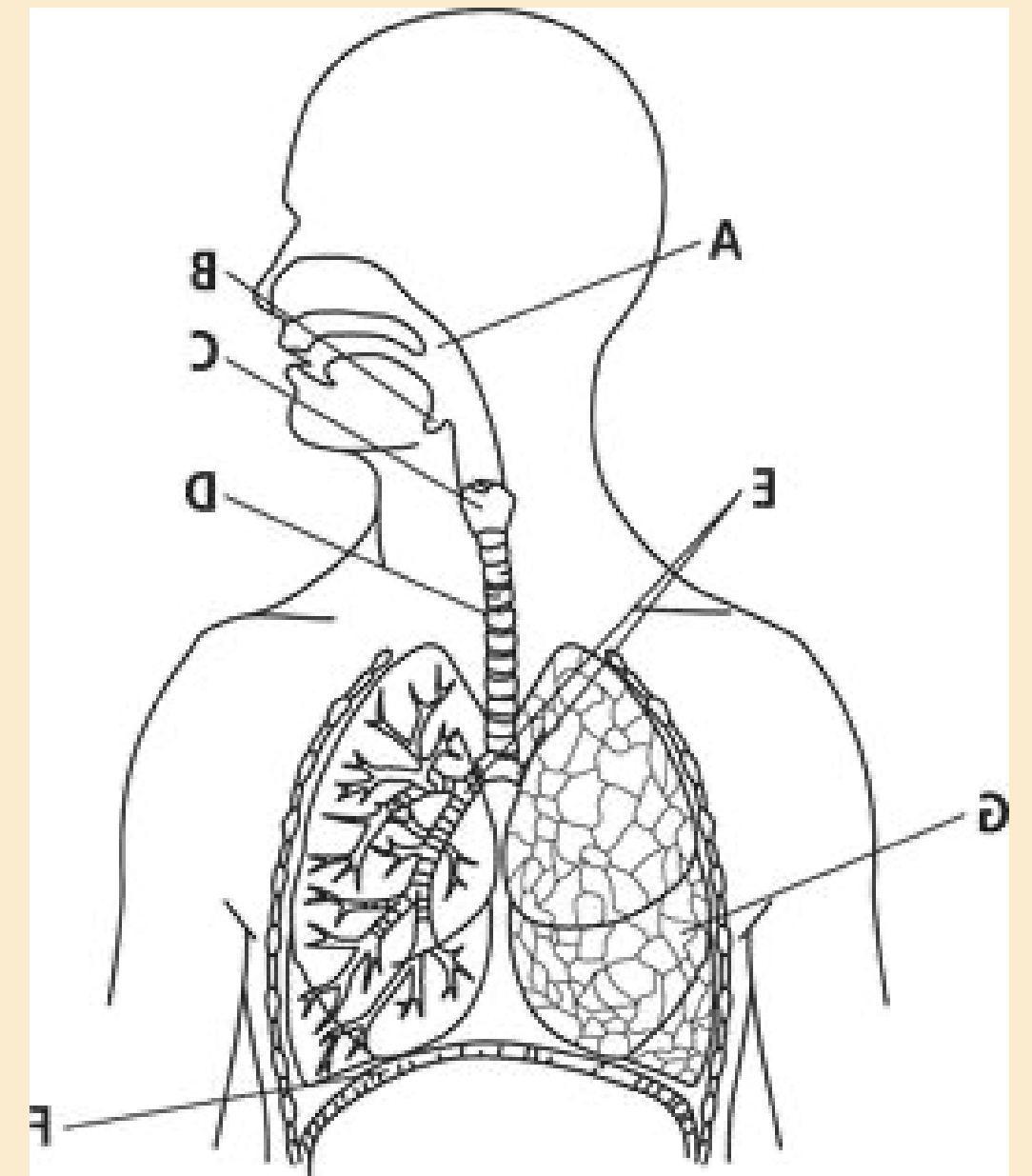
CORRECT

- 1.the part of the respiratory system contained in the lower neck and thorax LOWER AIRWAY
2. a soft, muscular structure in the mouth that is used for eating and speaking TONGUE
- 3.small tubes that carry air between the lower part of the trachea and the lungs BRONCHI
4. the system in the body that performs functions related to breathing RESPIRATORY TRACT
- 5.the part of the respiratory system contained in the head and upper neck UPPER AIRWAY
- 6.an opening in the nose where air enters and leaves the body NASOPHARYNGX
- 7.an opening in the mouth where air enters and leaves the body OROPHARYNX

Respiratory system

Can you guess the word?

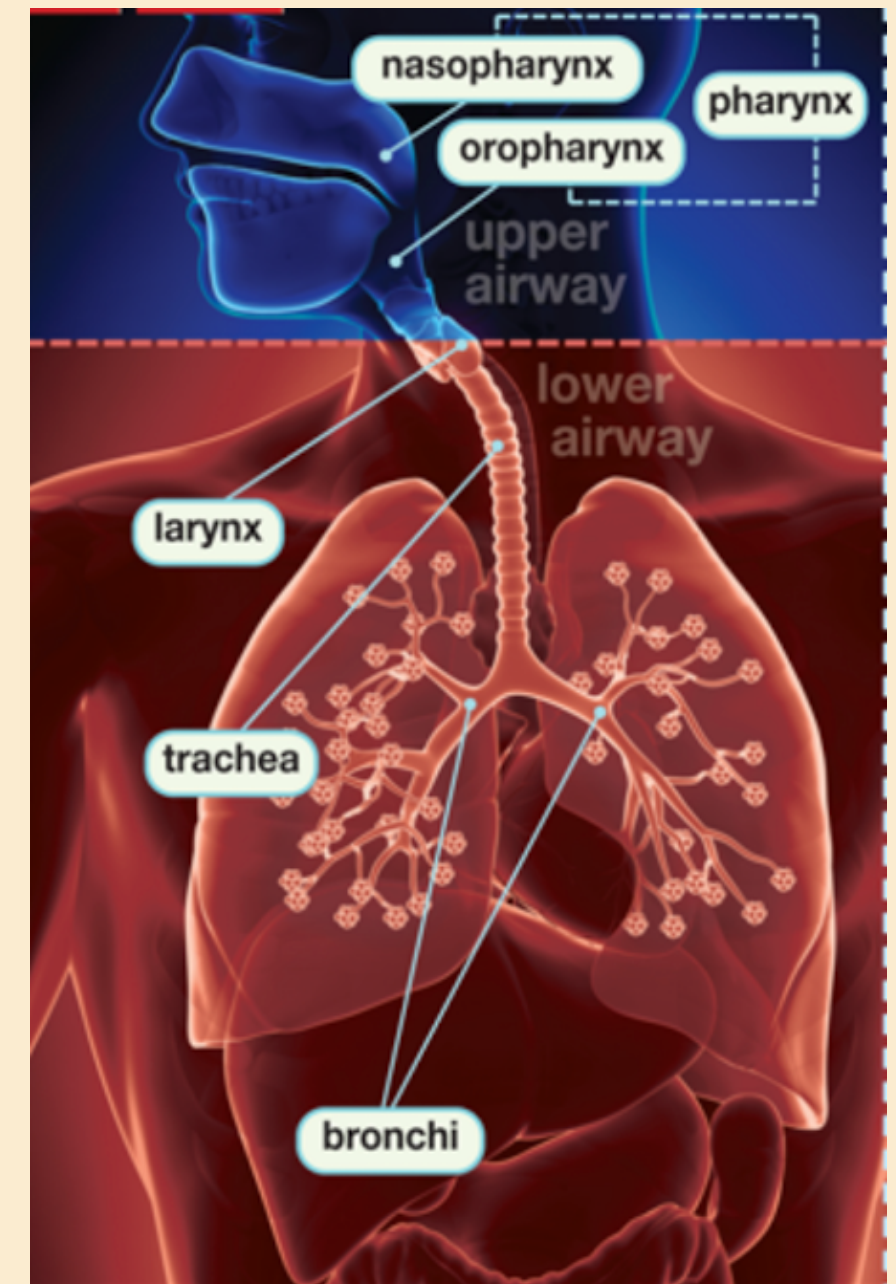
1. The PHARYNX is located in the upper throat.
2. Part of the TRACHEA is located in the thorax.
3. The closing of the LARYNX depends on the materials in the airway.
4. The lungs receive oxygen directly from BRONCHI.



Respiratory system

Can you guess the word?

The treatment for a blocked airway depends on the LOCATION and cause of the OBSTRUCTION. For instance, if there is a FOREIGN object in the PHARYNX, it simply needs to be REMOVED.



Respiratory system

Listen and write the correct word.

NURSE: Hi Mrs. Blake. I have a few QUESTIONS before the doctor sees you. Are you still SMOKING?

PATIENT: Yes, but not very much.

NURSE: Still, you need to quit. You understand the risks, don't you?

PATIENT: Of course, I know it causes LUNG CANCER AND EMPHYSEMA.

NURSE: Yes, plus people around you are at risk of developing ASTHMA.

PATIENT: I know. And I don't want my kids getting it. But quitting is really hard.

NURSE: IT also helps heal the damage to your LUNGS and bronchial tubes.

PATIENT: Well, I'll THINK ABOUT it.

Respiratory system

Create your own conversation and act it out.

USE LANGUAGE SUCH AS:

Are you still smoking?

I know it causes lung cancer.

People around you are at risk.

Student A: You are a nurse. And you're talking to a patient about smoking. Tell Student B about:

- the risks of smoking
- second-hand smoke
- the benefits of quitting

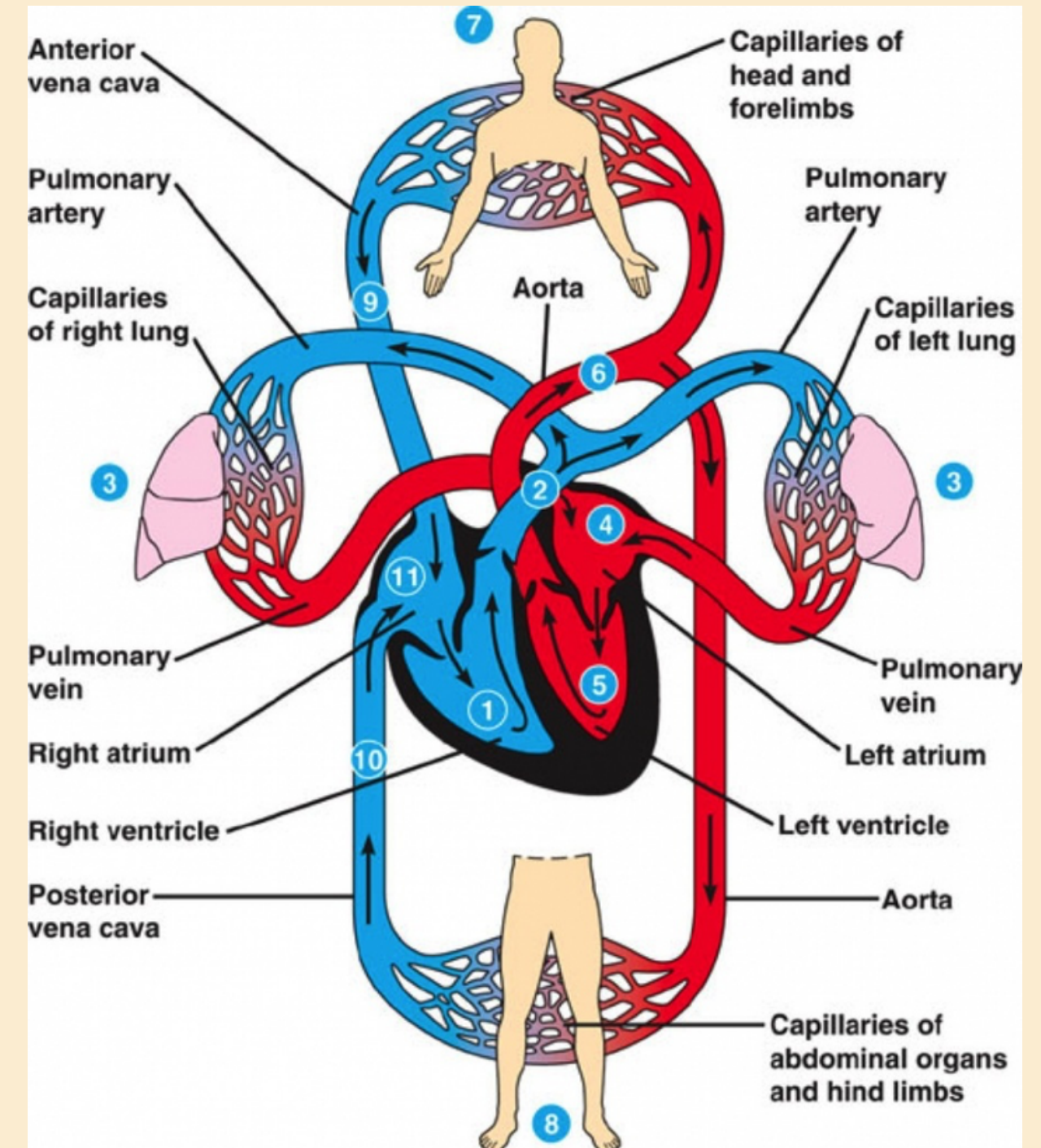
Student B: You are a patient who smokes. Answer Student A's questions.

Circulatory system

What are some parts of the cardiovascular system?

What is the correct _____ at which you should _____ chest compressions on an _____ victim of cardiac arrest?

SPEED
ADULT
PERFORM



Circulatory system

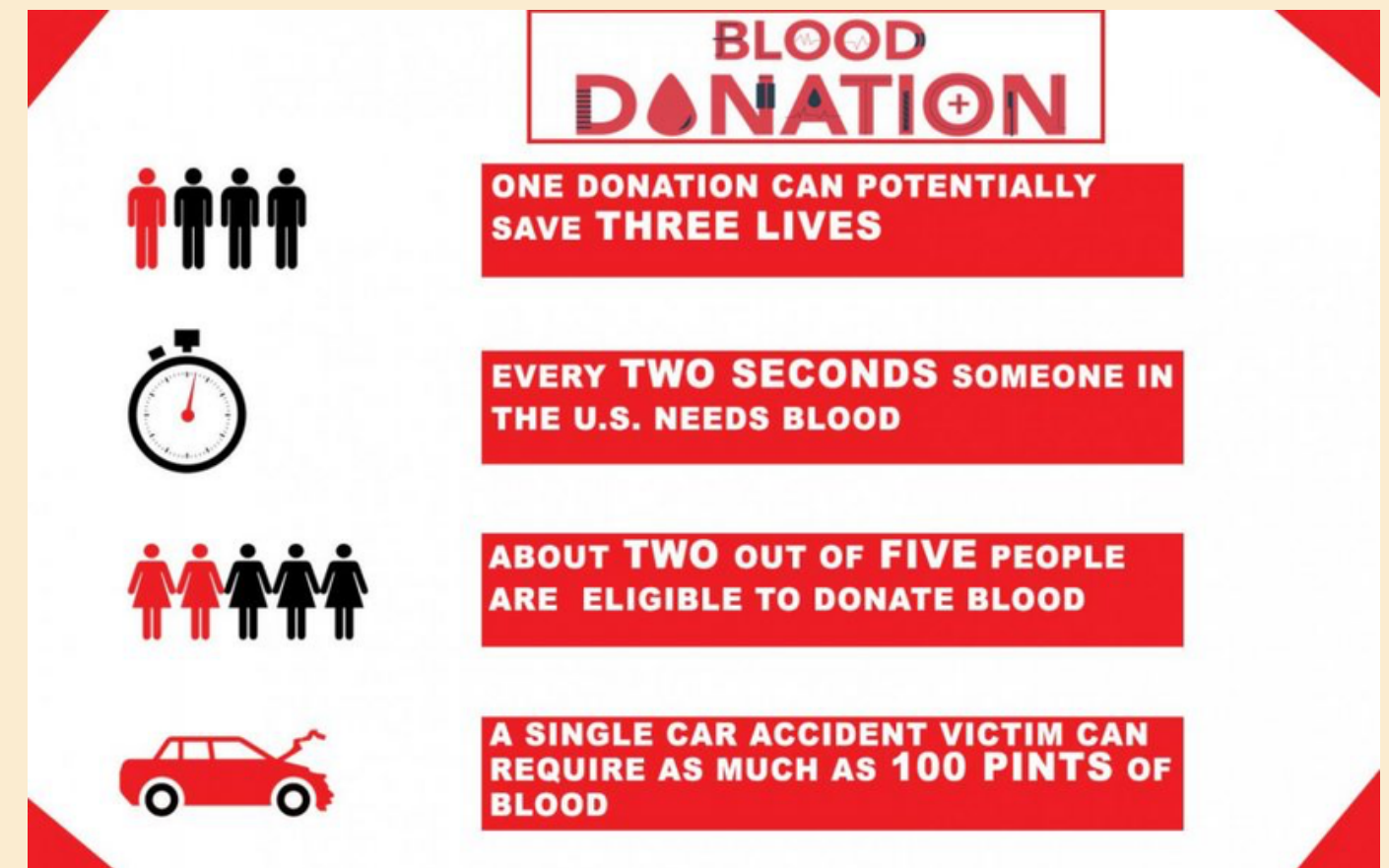
What is the correct word?

- | | |
|--|---------------------------|
| 1.the network of parts that transports vital substances throughout the body | CIRCULATORY SYSTEM |
| 2.any pathway that transports blood within the body, such as a vein | BLOOD VESSEL |
| 3.a fluid that travels throughout the body to distribute nutrients and oxygen | BLOOD |
| 4.an organ in the respiratory system that receives O ₂ and releases CO ₂ | LUNG |
| 5.a type of vessel that carries blood from the heart to the rest of the body | ARTERY |

Circulatory system – blood

Watch the video and answer these questions:

1. What happens to your blood after it is taken (post donation stage)? (2 steps)
2. What are the blood components and what are their functions?
3. Which of the blood components can be shipped worldwide? Why?
4. Why is donation of this component awarded financially? Why is it controversial?
5. Can the controversy be sorted out? How?



Circulatory system – blood

1. What happens with your blood straight after it is taken?

- a. taken to the lab to identify any infectious diseases + blood type, spin centrifuge = separated into three different components
- b. storing (platelets - 3 days, red blood cells - 42 days, plasma -1 year)

2. What are the blood components and what are their functions? - red blood cells, platelets, plasma

- a. red blood cells - contain hemoglobin, helps to transport oxygen and carbon to/from lungs (patients with low blood cell count - anaemia, after surgery)
- b. platelets - help blood to coagulate properly (cancer patients)
- c. plasma - liquid that shuffles cells throughout body, contains antibodies (rare chronic conditions)

3. Which of the blood components can be shipped worldwide? Why?

- a. plasma - because it can be frozen for 1 year

4. Why is the donation of this blood component awarded financially? Why is it controversial?

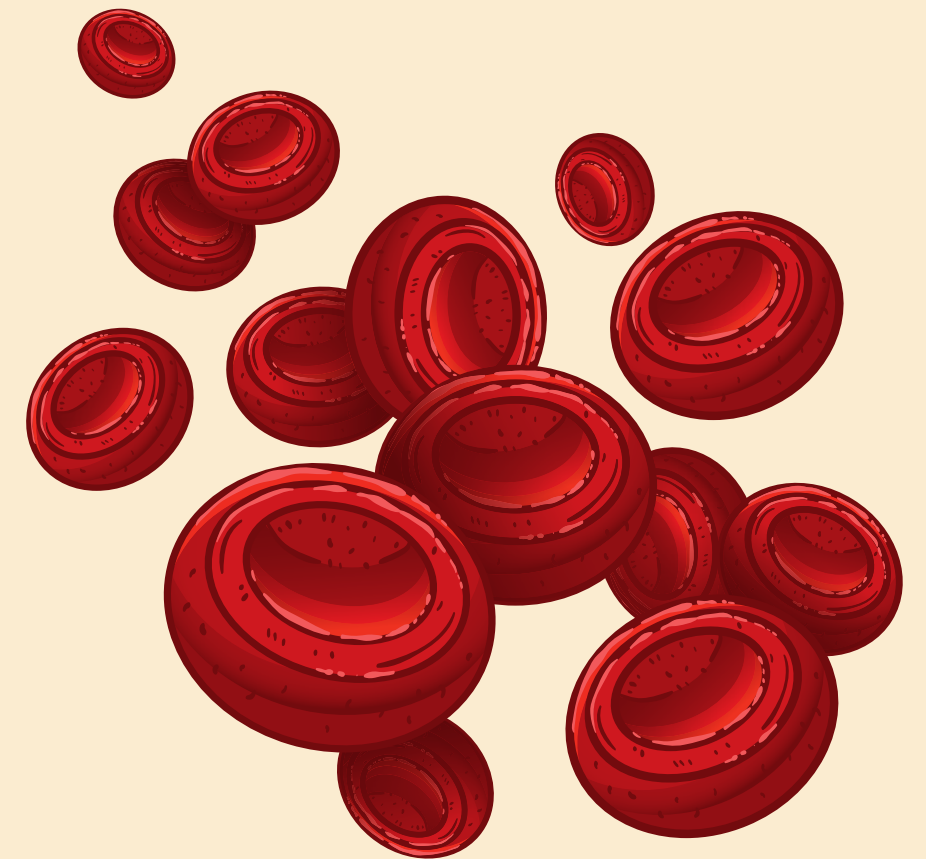
- a. it's time consuming (needle is in for 40 - 45 minutes), because people lie about their health

5. How can the controversy be sorted? - giving compensation for goods or services, Italy - days off

Circulatory system – blood

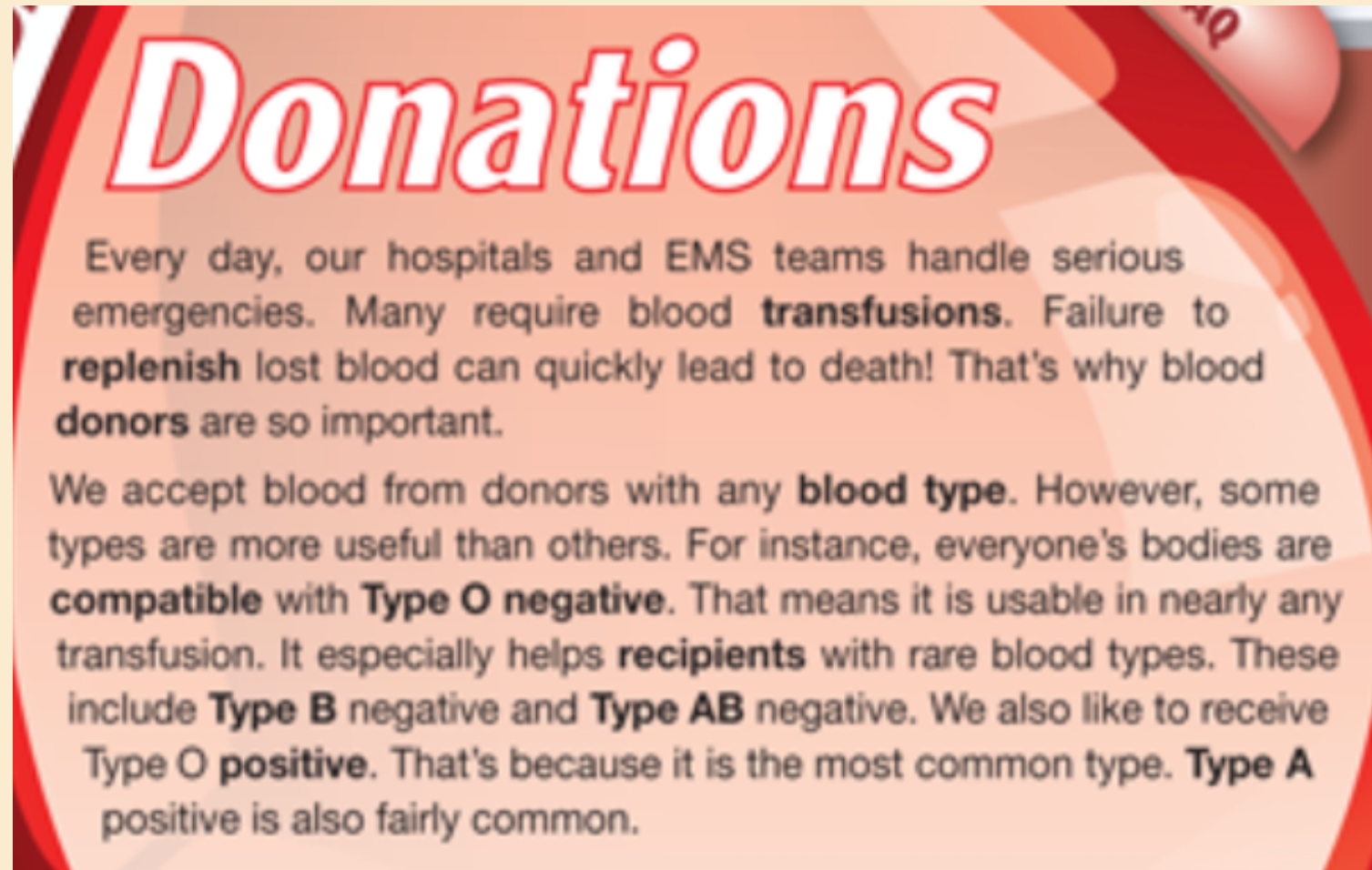
Discuss these questions with your partner

1. Have you ever donated blood? If yes, what was your motivation?
2. Is there enough blood being donated? How could people be motivated to donate blood?
3. What are some reasons not to be able to donate blood?
4. Is there any financial award for donating blood in the Czech republic?



Circulatory system – blood

Find the word or phrase which has similar meaning to the bold part.



1. Doctors increased the amount of patient's blood after the accident. REPLENISHED
2. If the person's blood is containing the Rhesus factor, he or she cannot donate to those without the Rhesus factor. POSITIVE
3. The patient has blood that fights B-antigens, so she cannot receive Type B. TYPE A
4. Blood that is compatible with both A- and B-antigens tends to be fairly rare. TYPE AB

