

Unit 1: Introduction to tissues

Lesson 2: Structural organization of human body

Activity 1 (15'): Body system

Step1: Read the following text and underline words you do not know. Text

Groups of cells that have a similar structure and work together to perform a specific function form a **tissue**.

There are four types of tissues: epithelial tissue, muscle tissue, nerve tissue and connective tissue.

Different types of tissues that have a specific function for the body form an **organ**.

A **system** consists of groups of organs that work together to contribute to specific tasks. There are 12 different types of systems:

- skeletal system, made of bones, which protects internal organs (e.g rib cage), and it is associated with joints that allow movement;
- muscle system possesses the ability to contract and relax causing body movements;
- nervous system controls and coordinates all the functions in the body and responds to external stimuli;
- respiratory system provides oxygen to the body and removes carbon dioxide from the body;
- reproductive system consisting of sex organs and glands that allows humans to reproduce;
- immune system defends the body against pathogens (harmful bacteria or viruses etc);
- lymphatic system that has three main functions: absorption of fats, fluid balance and protection from infections;
- endocrine system, group of glands secreting hormones to the circulatory system (e.g. pancreas, ovaries, thyroid, testes);
- urinary system eliminates waste products (urea) from the body and regulate the blood volume and composition;
- integumentary system protects the body from environmental factors;

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- circulatory system allows blood to transport nutrients, oxygen, carbon dioxide, hormones to and from the cell in the body;
- digestive system converts food into nutrients important for the body.

Step 2. Following step 1 match the name of the system (column A) with some of its function (column B)

A System	B Function
1. Endocrine	a. Supports and protects the organs beneath it
2. Skeletal	b. Breaks down food into smallest pieces and absorbs the nutrients.
3. Muscular	c. Gas exchange: inhalation of oxygen and exhalation of carbon dioxide
4. Digestive	d. Transports nutrients, gases, hormones etc, throughout the body. It removes waste products.
5. Immune	e. Produces the offspring
6. Respiratory	f. Detects environment changes; Responds to stimuli
7. Reproductive	g. Is responsible for the movement of the body.
8. Lymphatic	h. Produces and secretes hormones
9. Nervous	i. Removes liquid waste from the blood in the form of urine
10. Circulatory	j. Protects against diseases
11. Integumentary	l. Acts as a barrier to protect the body from the outside world
12. Urinary	m. Helps rid the body of toxins, waste and other unwanted materials

1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____
 10. _____ 11. _____ 12. _____

Activity 2 (10') : Human body system drawings

The following drawings show step 1 different systems.

Label each image with its proper name. (The drawing vii represents two systems)

i) _____ ii) _____

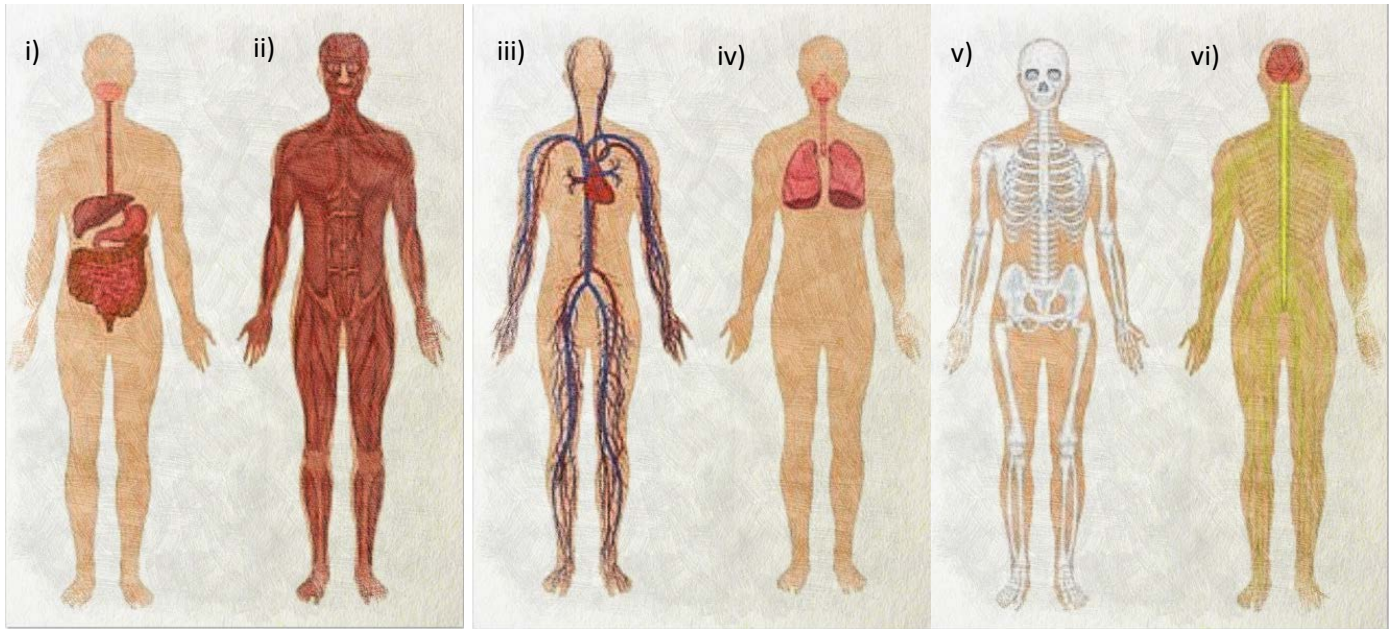
iii) _____ iv) _____

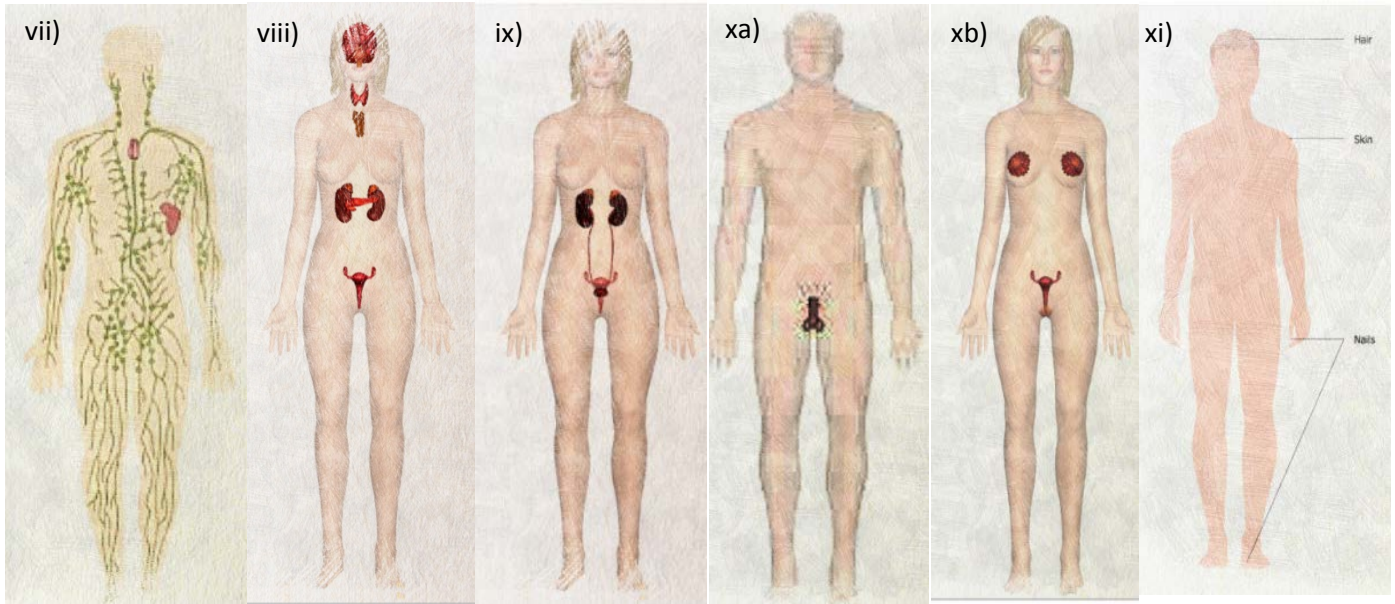
v) _____ vi) _____

vii) _____ viii) _____

ix) _____ xa) _____

xb) _____ xi) _____





Images modified from "The Human Body Anatomy, Facts and Functions" by Rachel Rettner

Activity 3 (15'): **Organs**

Each body system is composed of different organs. In the following word puzzle there are two organs for each system. In pairs, search the 21 organs, the first and the last letter of each organs has been written for you.

Z N I A R B P E J U R E T E R
 L E S S E V C I T A H P M Y L
 M I I P R N R G T A R T E R Y
 X D N I U S O V Q U J Q Q H O
 A I S N N H C B H I I L J S J
 O O U A U I C R I I A T U A B
 X R G L Q E K V O R W H A I A
 V Y A C U J V S Y T C U Z R S
 A H H O T T J N N N U S N W Y
 G T P R E Y X I O X P M L Y P
 I M O D R W O R R A M E N O B
 N G S I U C B B G E M O U T H
 A Q E H S V D R R E D D A L B
 B D I O H P M Y L S U M Y H T
 C C C L E L C I T S E T U E F

B__E	M__H
A___Y	E_____S
L_____L	U____R
B_____W	B_____R
T____S	U____S
B___N	V____A
S_____D	S_____M
S__N	T_____E
L_____D	P_____Y
L____X	T_____D
B_____S	

Activity 4 (10'): Peer-assessment

In pairs, write at least 3 organs for each system. Then, compare your answers with the class.

- 1. Integumentary _____
- 2. Circulatory _____
- 3. Immune _____
- 4. Lymphatic _____
- 5. Digestive _____
- 6. Urinary _____
- 7. Respiratory _____
- 8. Reproductive _____
- 9. Skeletal _____
- 10. Muscular _____
- 11. Nervous _____
- 12. Endocrine _____

Assessment

	Seldom	Sometimes	Often
Contributed good ideas			
Listened to and respected the ideas of others			
Compromised and cooperated			
Took initiative where needed			
Communicated effectively with team mates			
Did my share of the work			