

## Chapter- 8

# Man: The Living Machine

### STUDY NOTES

#### LET'S LEARN

**The human body is a living machine.**

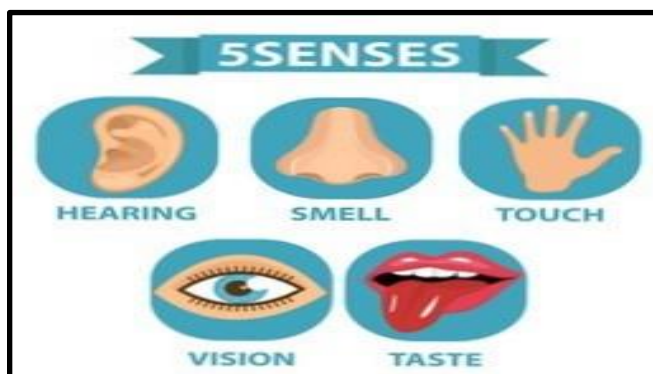
- It can see, hear, smell, taste and feel. It can also move, grow, breathe and reproduce.
- The human body is made of cells.
- Cells of the same kind join together to make a tissue.
- Tissues join together to make an organ.
- Many organs together form an organ system.
- Different organ systems work together to make it possible for the body to do many other things.

#### Our sense organs

**The main sense organs are the eyes, the ears, the nose, the tongue and the skin.**

- The eyes help us to see.
- The ears help us to hear.
- The nose helps us to smell.
- The tongue helps us to taste.
- The skin helps us to feel the temperature.

All these sense organs are connected to the brain through the nerves. The sense organs send messages to the brain. The brain makes us understand pictures, sounds, smells, tastes and feelings. While the sense organs help to know the surroundings.

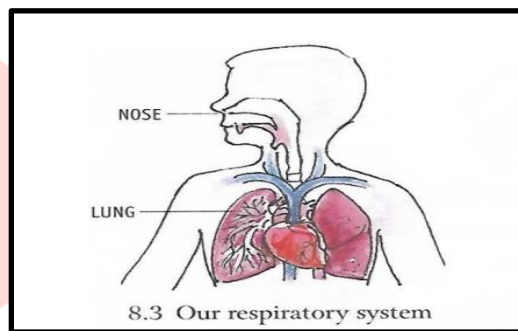


### The respiratory system

- The respiratory system supplies oxygen to various parts of the body.
- The air is taken through the nose.
- The hair in the nose prevents dust and germs from entering the body.
- The air that we breathe in is called oxygen. The air breathe out is carbon dioxide in it.

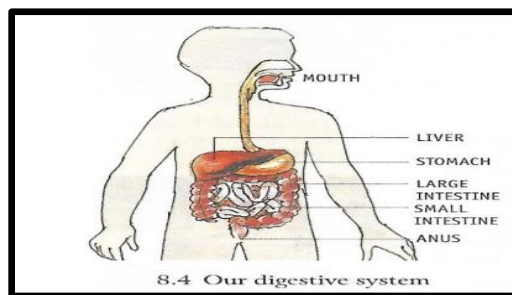
#### We should:

- breathe in fresh air.
- breathe through our nose not our mouth.
- keep the windows of the rooms open.
- not cover our face while sleeping.



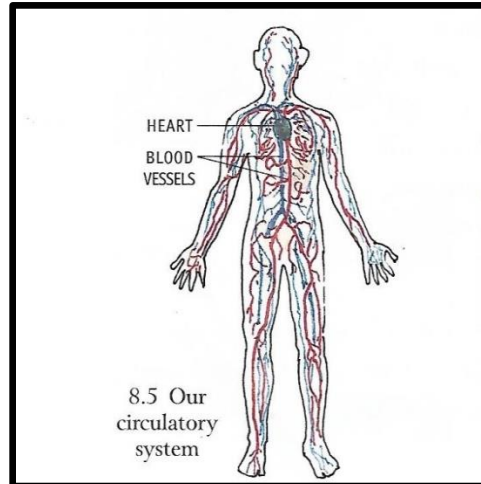
### The digestive system

- Digestion is the process of changing of food into a simple form so that it can be used by the body.
- The food that is chewed mixes with saliva and becomes soft and goes to stomach.
- In the stomach the food mixes with the digestive juices. After four hours of eating the food goes into the small intestine and digested food is taken in by the blood and carried to the other parts of the body.
- The undigested food goes to the large intestine and from there it is thrown out through the anus.

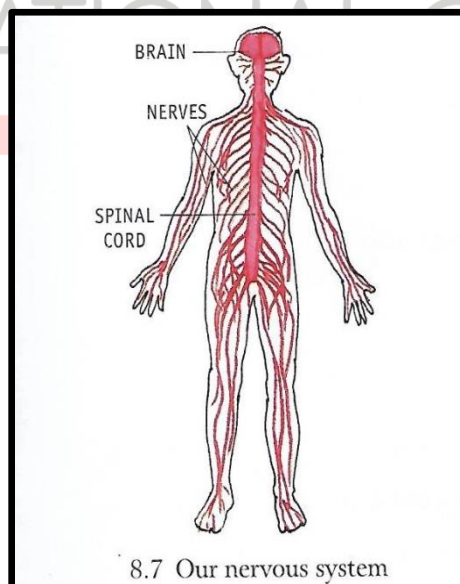


**The circulatory system.**

- The heart, the blood and the blood vessels make up the circulatory system.
- The heart pumps the blood to different parts of the body through small and big blood vessels

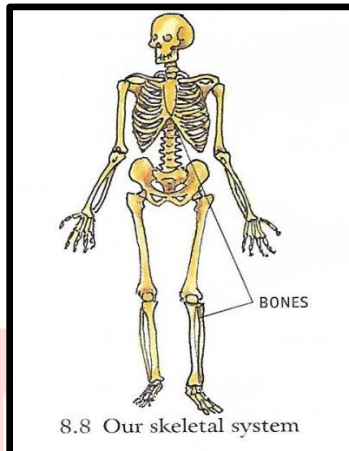
**The nervous system**

- This system consists of the brain, the spinal cord and the nerves.
- The nervous system controls all the actions like seeing, hearing, walking and learning.



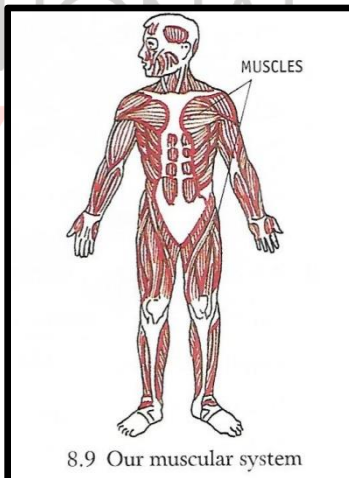
### The skeletal system

- The bones together make up the skeletal system.
- The bones give shape and support to the body.
- There are 206 bones in our body.
- We can stand, walk and move because of our bones.



### The muscular system

- The muscles along with the bones help the body and its parts to move.



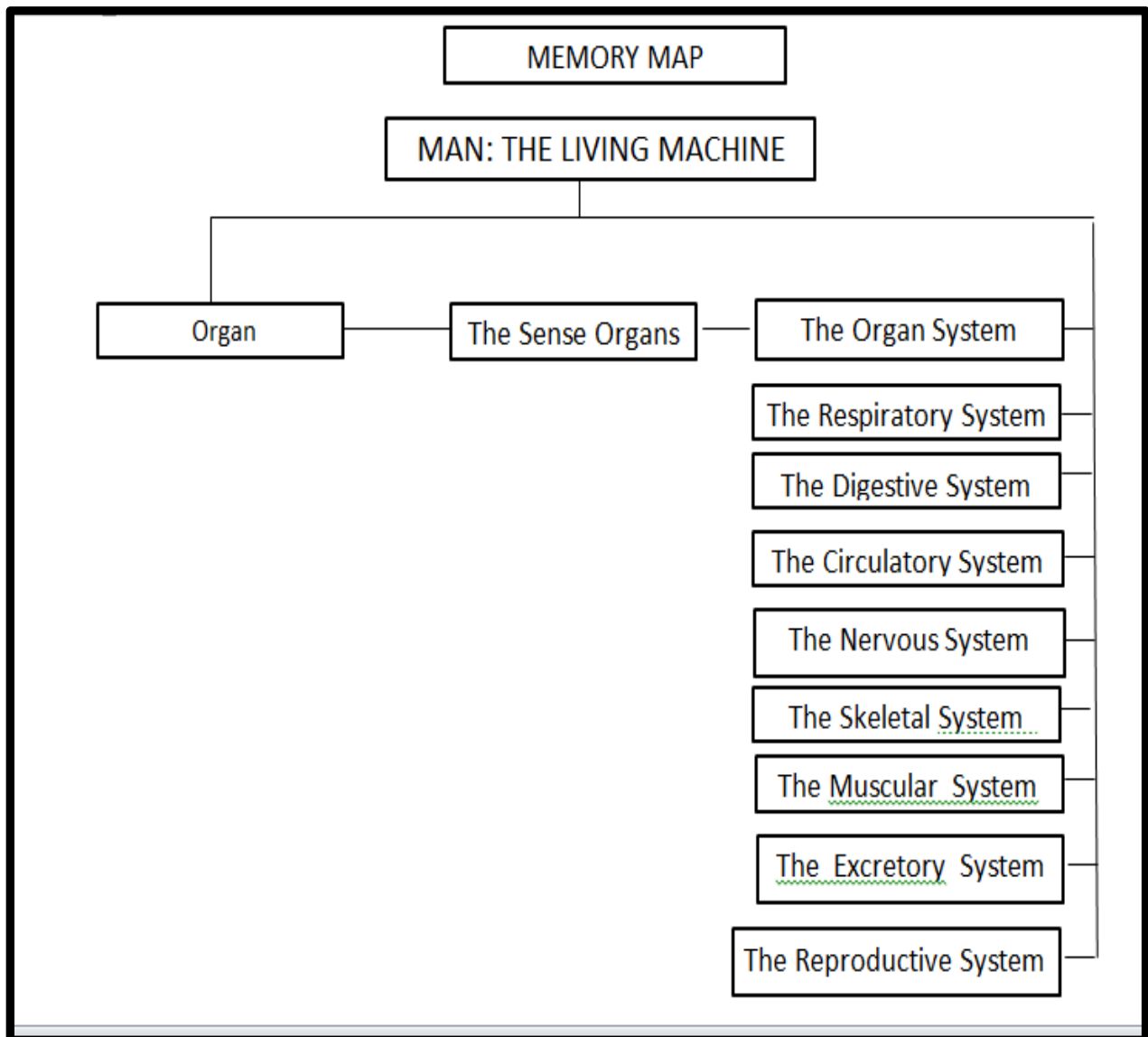
### The excretory system

- The waste in the body has to be removed regularly for the body to work smoothly.
- The kidneys remove urine.

- The skin removes sweat.
- The lungs throw out carbon dioxide.

### The reproductive system

- The organs of this system help to produce babies.
- Because of this system life on earth goes on.



**Teacher's note**

Make a list of accessories used by a cricketer in the project record.

**Improve your G.K.**

- Blood makes up about 8 percent of your total body weight.
- The human nose detects about 1 trillion smells.
- The heart beats more than 3 billion times in the average human lifespan.
- Humans are the only animals with a chin.
- You have two kidneys, but only one is necessary to live.

**Let's know more****1. Re-arrange the sentences to show the correct sequence of the process of digestion.**

- a. The water from the undigested food is absorbed in the large intestine. \_\_\_\_\_
- b. We chew our food. \_\_\_\_\_
- c. Chewed food passes into the stomach and is partly digested. \_\_\_\_\_
- d. The food is broken down fully into simple substances in the small intestine. \_\_\_\_\_
- e. The broken down substances are absorbed and sent to all parts of the body through blood. \_\_\_\_\_
- f. The undigested waste material is sent out through anus. \_\_\_\_\_

**Let us answer****A. Tick ( ✓ ) the correct answer.**

1. This organ pumps blood to the different parts of the body.
 

a. brain	b. heart	c. liver.
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2. These give shape and support to our body.
 

a. bones	b. cells	c. muscles
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3. Kidneys remove
 

a. carbon dioxide	b. sweat	c. urine.
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4. The nervous system consists of brain, spinal cord and
 

a. heart	b. nerves	c. 206 bones
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**B. Circle the odd one out.**

1. ears	nose	heart	skin
2. small intestine	kidneys	stomach	saliva
3. blood	nerves	heart	circulation
4. kidneys	urine	brain	sweat

**C. Answer these questions.**

1. How are the sense organs connected to the brain?
2. Is it right to keep the windows of our rooms closed all the time? Why?
3. What does oxygen do inside our body?
4. Which two organ systems help the body and its parts to move?
5. What is the function of the reproductive system?

**Answer Key**

**Let's know more**

1. b, c, d, e, a, f

**Let us answer**

- A. 1-b, 2-a, 3-c, 4-b

- B. 1. heart    2. Kidneys    3. nerves    4. brain

C.1.Ans: The sense organs connected to the brain through the nerves.

2. Ans: It is not right to keep the windows of our rooms closed all the time because we need to breathe in fresh air.

3.Ans: The oxygen burns up the food we eat and give us energy.

4.Ans: The skeletal system as well as the muscular system helps the body and its parts to move.

5.Ans: The main function of the reproductive system is to produce babies as a result the life on the earth goes on.

