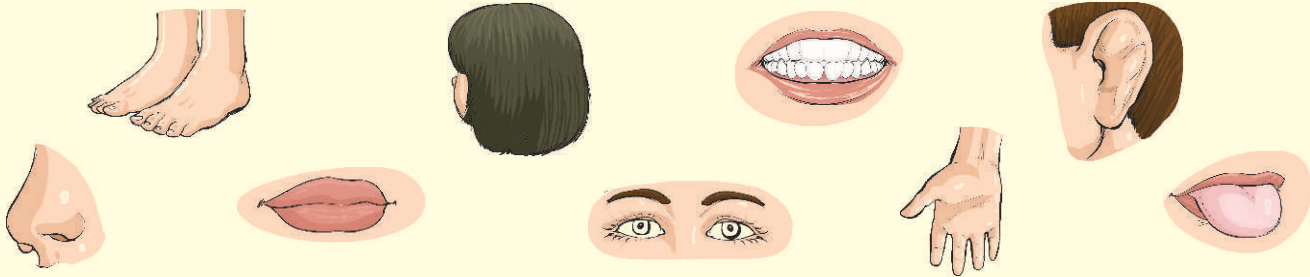


BEFORE WE START, LET'S CHECK

What you already know

Given below are the pictures of some body parts. Circle sense organs among them.



What you will know

What is our body made up of?



How can we move our body?



Why do we breathe?



Where does the food that we eat, go?



We are living beings. We have many body parts. Some parts are on the outside of the body, which we can see. Some parts are inside the body, which we cannot see.

All people's body parts are similar. However, there is some difference in the size, shape, colour, etc. of some body parts, especially outer ones. Some people are tall whereas some are short. Some are fair while some are dark. Some have black eyes while some have green eyes.

These differences can be clearly seen in people living in different geographical areas.



Let us now study what is inside our body.

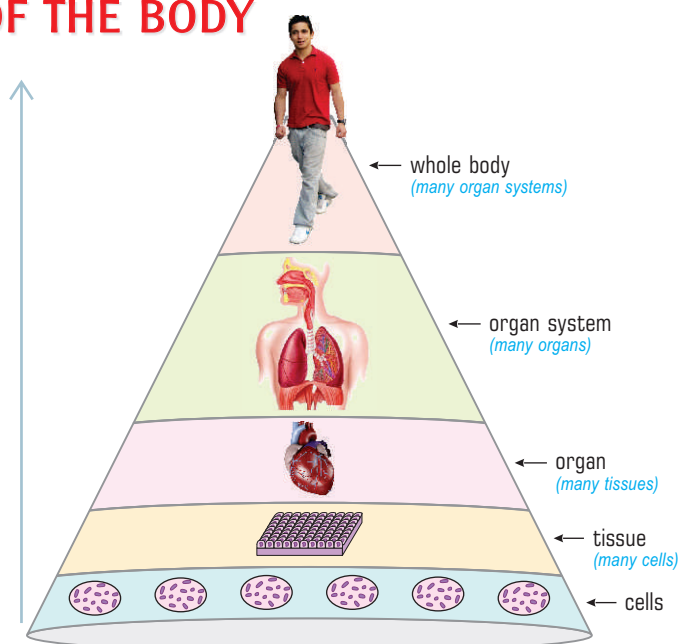
COMPOSITION OF THE BODY

A **cell** is the basic unit of all living things. It is the tiniest living unit. Our body is made up of numerous cells.

There are different kinds of cells. Cells of the same kind join together to form a **tissue**. Different tissues together form an **organ**.

A group of organs performing the same type of function forms an **organ system**.

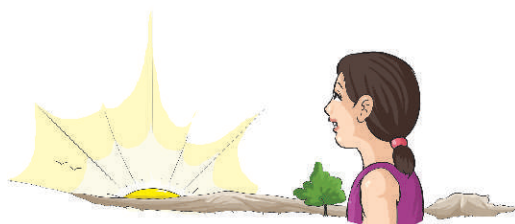
There are many organ systems in our body. They help us to do various activities.



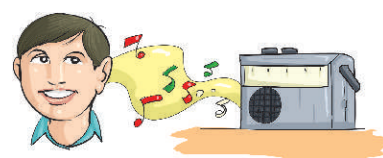
ORGANS

Each organ in our body performs a specific function. Eyes, ears, the nose, the tongue and skin are our **sense organs**. With the help of these, we can 'sense' or know about various things around us.

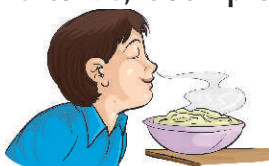
We see various things with the help of our eyes.



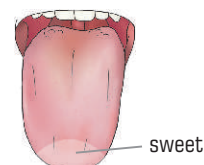
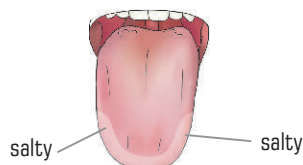
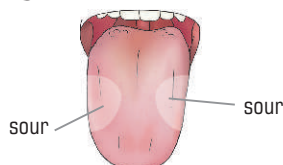
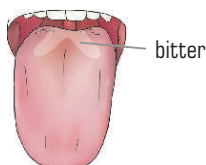
Our ears help us to hear different sounds.



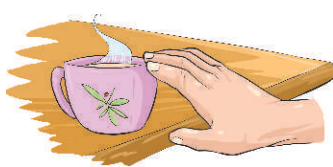
Our nose introduces various smells to us, both pleasant and unpleasant.



We can identify various tastes like sweet, salty, sour, bitter, etc using our tongue. Different areas in our tongue are more sensitive to different tastes.



Skin helps us to know whether a thing is hot or cold, smooth or rough, hard or soft, etc.



ORGAN SYSTEMS

Our body is made up of eight main organ systems. Let us study them one by one.

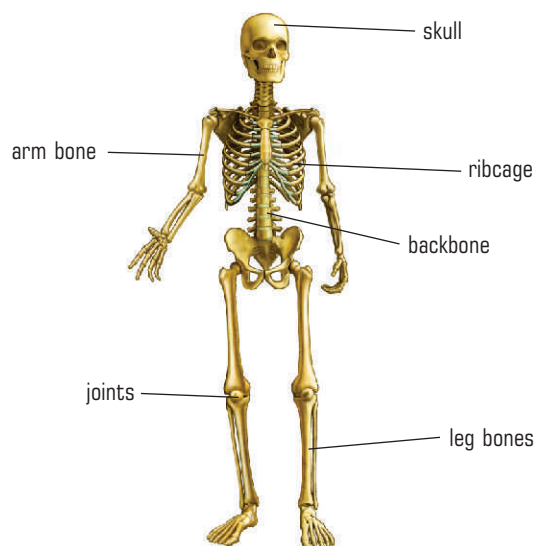
The skeletal system

The bones in our body make up the skeletal system. There are 206 bones in our body.

This system gives shape and support to our body.

It also protects our inner body parts from getting injured. The skull protects the brain. Ribs protect the heart and the lungs.

Two or more bones are connected at **joints**. Joints allow us to bend or twist our body parts.



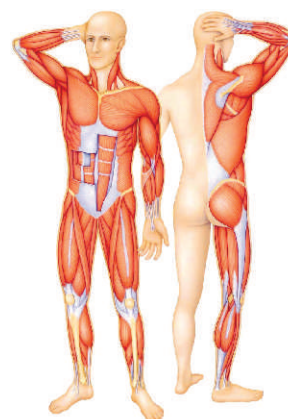
the skeletal system

The muscular system

Muscles are the soft, fleshy inner parts of our body. There are about 600 muscles. All of these together make the muscular system.

Muscles are connected to bones. They allow us to move different parts of our body.

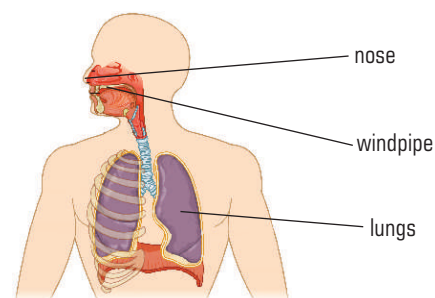
Some muscles move on their own. For example, the heart consists of muscles and it beats on its own. While the rest of the muscles are in our control. For example, we can move our arms whenever we want.



the muscular system

The respiratory system

We need to breathe in order to live. Our nose, windpipe and lungs help in breathing. All of these together make the respiratory system.



the respiratory system

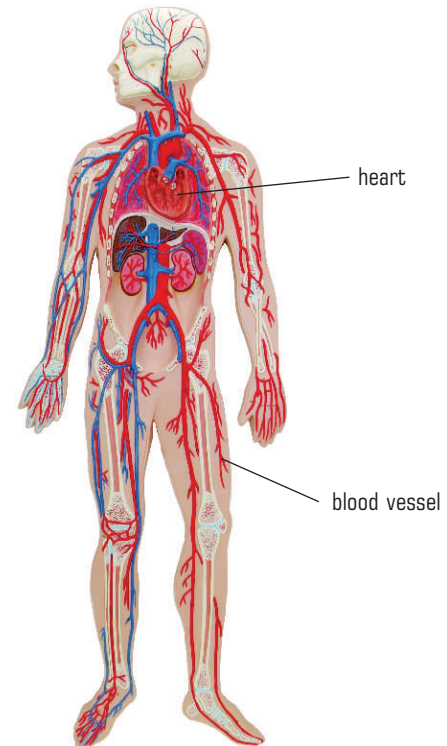
We take in air through our nose. The air goes down the windpipe. It then reaches the lungs. The lungs take in the gas called oxygen. Oxygen burns food and gives us energy. The lungs then release the gas called carbon dioxide, which we breathe out.

The circulatory system

This system performs the function of carrying oxygen and nutrients to all parts of the body. It also brings back carbon dioxide and waste materials.

The heart, blood and blood vessels make up the circulatory system.

The oxygen absorbed by the lungs is mixed with blood. The heart works like a pump. It pumps blood to all parts of the body. The blood flows through blood vessels.



the circulatory system

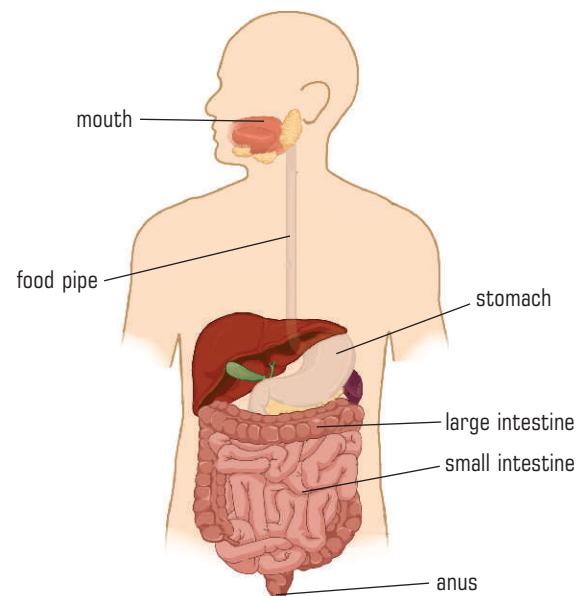
The digestive system

This system helps in digestion of the food that we eat. Digestion means the breaking down of food into simple forms so that our body can use it.

The food that we chew in the mouth mixes with saliva and becomes softer.

It then moves into the stomach after passing through the food pipe.

In the stomach, the food mixes with the digestive juices and breaks into the simplest form. It is then absorbed by the small intestine. From here, the nutrients are taken in by the blood.



the digestive system

The leftover food which cannot be used by the body goes to the large intestine. Large intestine absorbs water and prepare the leftover food as a solid stool. From there, the stool is thrown out through the anus.

We must eat healthy food at regular intervals to keep ourselves fit.

The excretory system

This system cleans the body by throwing out wastes. Kidneys, lungs and skin form part of this system.

Urine, sweat and carbon dioxide are body wastes. The kidneys produce and throw out urine. The skin gives out sweat and the lungs give out carbon dioxide.

The nervous system

This system controls all our actions like walking, hearing and seeing. It also controls all other systems in our body.

The brain, the spinal cord and nerves form the nervous system.

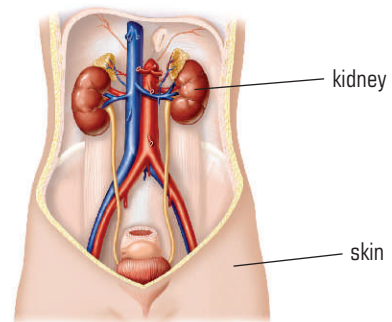
The brain controls the whole body. It helps us to decide, learn, think and understand.

The brain connects itself to each and every part of our body through the spinal cord and nerves.

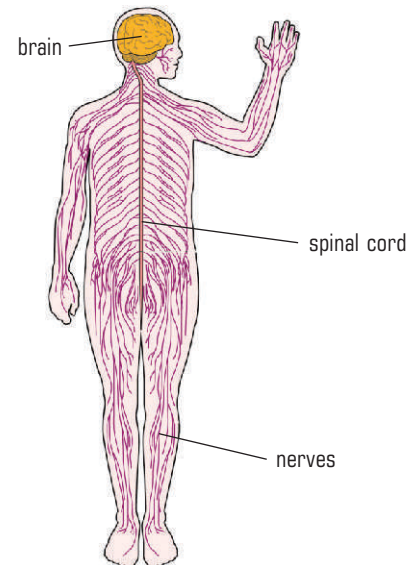
The brain sends messages about what to do to all parts of the body through nerves.

The reproductive system

The organs of this system help to produce babies. The baby stays inside the mother's body for nine months. It gets food and air from the mother's body.



the excretory system



the nervous system



a mother with her baby inside her body

Words to Remember

cell	– the basic unit of our body
tissue	– a group of the same kind of cells
organ	– a group of tissues
sense organs	– the organs that help us to know about various things
joint	– the place where two or more bones join
nutrient	– a healthy substance in food
digestion	– the breaking down of food into simple forms so that the body can use it

Points to Recall

- * All humans have the same outer body parts, yet they differ in appearance.
- * Our body is made up of numerous cells.
- * Each organ has a specific function to perform.
- * An organ system consists of a group of organs that perform the same type of functions.
- * We have five sense organs, which help us to know about various things.
- * The skeletal system gives shape and support to our body.
- * The muscular system helps us to move various body parts.
- * The respiratory system helps us to breathe.
- * The circulatory system carries oxygen and nutrients to all parts of body.
- * The digestive system changes the food eaten by us into a simple form.
- * The excretory system cleans the body by throwing out wastes.
- * The nervous system controls all our actions.
- * The reproductive system helps to produce babies.

Exercises

A. Tick (✓) the correct option.

1. People differ in their
(a) size ☐ (b) shape ☐ (c) colour ☐ (d) all of these ☐
2. Which of these is the smallest?
(a) tissue ☐ (b) organ ☐ (c) cell ☐ (d) organ system ☐
3. The sweet taste is identified by the _____ part of the tongue.
(a) front ☐ (b) side ☐ (c) middle ☐ (d) back ☐
4. Ribs protect the
(a) brain ☐ (b) stomach ☐ (c) kidneys ☐ (d) lungs ☐
5. Which of these is not a part of the digestive system?
(a) stomach ☐ (b) mouth ☐ (c) heart ☐ (d) anus ☐
6. The kidneys throw out
(a) sweat ☐ (b) urine ☐ (c) carbon dioxide ☐ (d) saliva ☐

B. Tick (✓) right statements and cross (X) wrong ones.

1. There are 206 muscles in our body. ☐
2. The skeletal system protects our internal organs. ☐
3. We breathe in carbon dioxide and breathe out oxygen. ☐
4. The nutrients absorbed by the lungs are mixed with the blood. ☐
5. The brain controls the whole body. ☐

C. Fill in each blank with the correct word.

1. People living in _____ (same / different) geographical areas look slightly different.
2. We _____ (can / cannot) control the movement of the heart.

3. The _____ (*brain / heart*) pumps blood to all parts of the body.
4. Skin gives out _____ (*urine / sweat*).
5. All the _____ (*nerves / veins*) are connected to the brain.

D. Answer in one or two words.

1. What is the smallest unit of our body? _____
2. What protects our brain? _____
3. What gas do the lungs take in? _____
4. What makes food softer in our mouth? _____
5. What does the reproductive system help to produce? _____

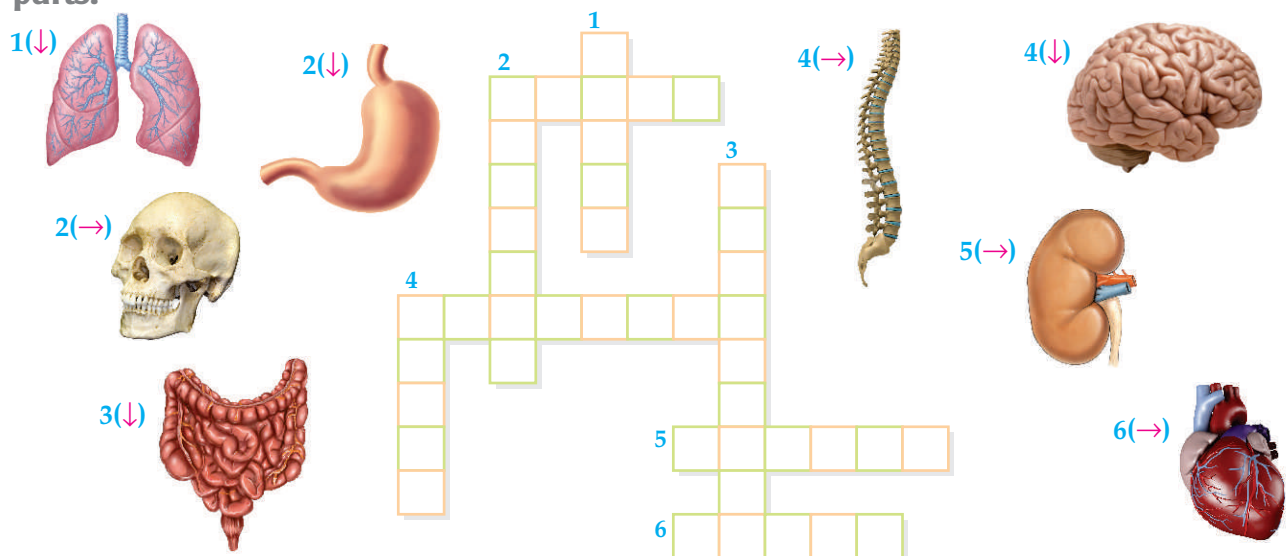
E. Answer in one sentence only.

1. What is an organ system?
2. Why are our sense organs called so?
3. How many muscles are there in our body?
4. What is digestion?
5. What is the function of the excretory system?

F. Answer in two or three sentences.

1. What is the use of our tongue?
2. How are bones useful to our body?
3. Can muscles move on their own? Explain with examples.
4. How is oxygen supplied to all parts of our body?
5. How does the brain control the whole body?

G. Look at the pictures and fill in the crossword with the names of the internal body parts.





BRAINSTORM

1. Sometimes, you accidentally touch a hot thing and take your hand away at once. What are the organs involved in this process?
2. Why does a batsman wear a helmet in a cricket match?
3. Why do we drink plenty of water during summer?

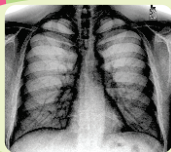


TELL YOUR TEACHER

Given below are some bad habits. Tell your teacher how each of them is harmful.

- Sapna breathes through her mouth.
- Rohit eats while lying down.
- Purva droops her shoulders while walking.
- Ankit does not go to the toilet daily.

FIND OUT



What is this picture called?
What is its use?



What is this doctor doing?
Name his instrument.

Project

Make a thermocol model or a chart illustration of the respiratory system. Submit it to your teacher.



Activity Time

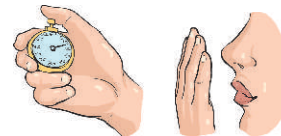
Count your breathing



1. Take a stopwatch and stand at a quiet place.

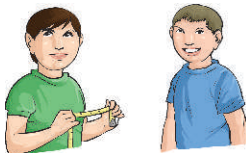


2. Place your hand in front of your nose and feel your breath.



3. Start the stopwatch and count the number of breaths in one minute.

Measuring chest size



1. Ask one of your friends to take a measuring tape and stand beside you.



2. Now breathe in and ask him to measure the size of your chest.



3. Then breathe out and get your chest measured again.

The measurement differs. Why? Tell your teacher.

Virtual Tour

For more information visit:

- <http://kidshealth.org/kid/htbw/>