

New



# Science Basics 3

Second Edition



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Be where the World is going

الرواد للنشر والتوزيع  
حيث يكون العالم؛ نكون

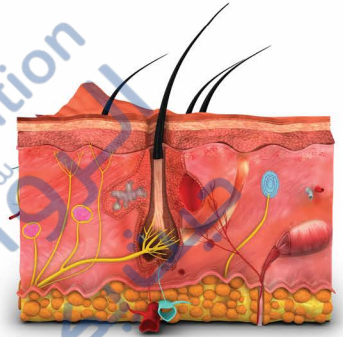
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## Theme 1 We Are Alive!

### Lesson 1 Our Body

The body is an amazing machine. It can do different kinds of work. It has many significant parts to learn about.

Our skin covers and protects everything inside our body. If we look closely at our skin, we can see little hairs growing on it. These are to keep us warm.



The skin differs in thickness from one body part to another. The thinnest part is under our eyes. Here, the skin is very thin.

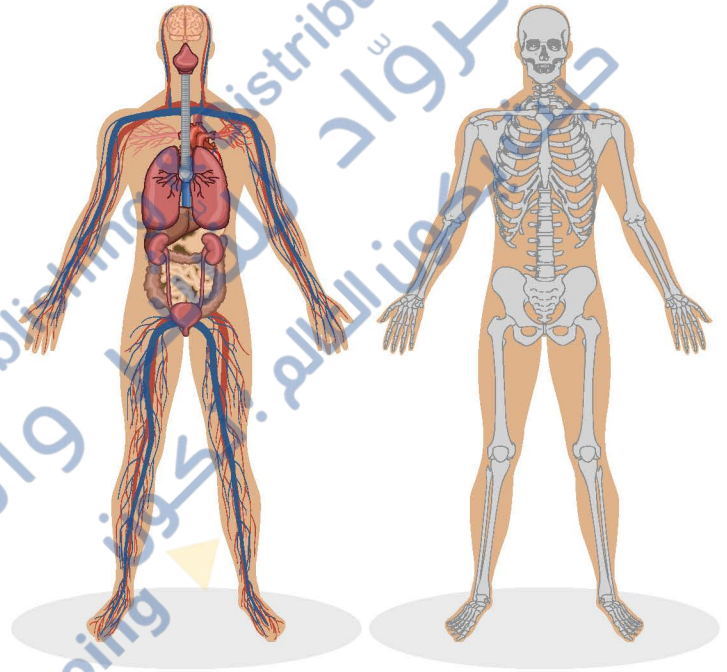
The thickest part is on the soles of our feet. Here, the skin is very thick.

Look for different textures of your skin.

Feel your left arm with your right hand.  
The top layer is soft. Now can you feel something hard below the top layer?

The soft parts are called muscles.  
The hard parts are called bones.  
Bones support you.  
They hold you up. Just think if you had no bones, what would happen?

Let's look at our hand; if your hand did not have any bones to support it, it would hang loose. We would not be able to use it. All the bones together form the skeleton.



The adult skeleton has 206 bones.  
The skeleton gives us our figure.  
Our skeleton bones are all joined together. The parts that bend are called joints.  
Having these joints allows us to move different parts of our body.  
We can move lots of joints at the same time.  
Try moving your hands and legs at the same time.



How many parts of your body can you name?  
Do all living things have bones and muscles?  
Can you make a long jump?  
For how long can you make it?

### Interesting Facts:

We have special designs on the skin of our fingers. These designs are called fingerprints. Every human being has unique and different fingerprints.

An adult has about 206 bones in their body, but a baby has about 300. Some of these bones join together as the baby grows older.

We have about 650 muscles in our bodies.

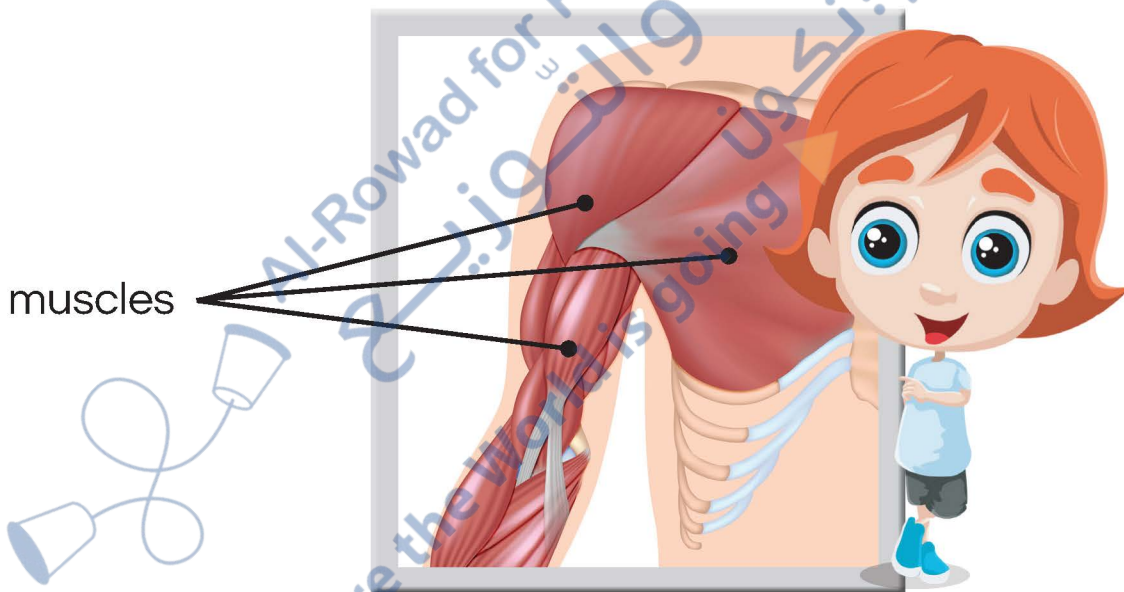
Muscles are attached to bones.

We use them to move our bones.

We use muscles called biceps to move our arms.

We need strong muscles to run quickly and to be good at sports.

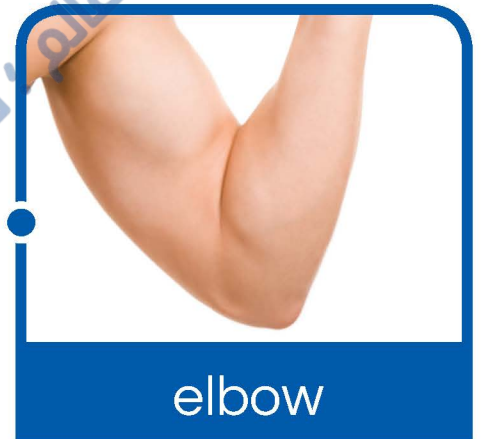
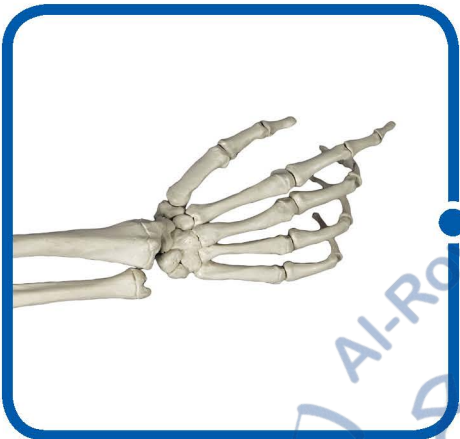
We need proper food and exercise to make our muscles strong.



### Remember

1. Skin covers our body.
2. Bones support our body.
3. The bones in our body form the skeleton.
4. Bones are Joined together. At many of these Joints, bones can move.
5. We use our muscles to move the Joints.

👍 Join the correct parts of the body to their matching bones.



 **Name these.**

- a) the hard parts of the body: \_\_\_\_\_
- b) we use them to move the joints: \_\_\_\_\_
- c) it covers the entire body: \_\_\_\_\_
- d) it gives your body a figure: \_\_\_\_\_

 **How can you make your muscles strong?**

\_\_\_\_\_

 **What do you think would happen:**

- a) if you had no bones? \_\_\_\_\_  
\_\_\_\_\_
- b) if you had only one bone from top to bottom? \_\_\_\_\_  
\_\_\_\_\_



**Project**

 **Measure a friend's biceps.**

Ask a friend to extend their arm.

Measure the thickness around the upper arm.

Now ask them to bend their arm.

Measure the thickness of the arm again.

Do you see any difference?

The biceps become shorter and thicker when you move your arm.

Do the same with some of your other friends.

 **Fill in the table.**

Name	Thickness of extended arm	Thickness of bent arm	Difference



## Project

### Take your fingerprints.

You can take your own fingerprints.

Press your fingerprints onto an ink pad.

Now press your finger tips on a piece of paper.

This is your unique fingerprint.

Compare your fingerprints with your friend's fingerprints.



### See how different they are:

Notice that no two people have the same fingerprint.



my fingerprint



My friend's fingerprints:

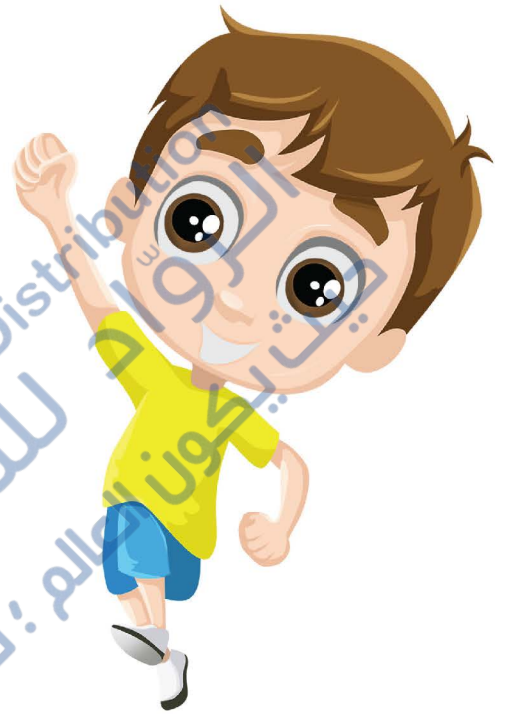


Each fingerprint is unique. They are all different.

We see different types of plants in the park or in the garden.  
Some plants are tall and strong, and some are small.

### Trees

- Tall and strong plants are trees.
- They have a thick brown stem called a trunk.
- They have many branches.
- They live for many years.



palm tree



mango tree



fir tree

## Bushes

- Bushes are smaller than trees.
- They have hard stems.
- They have many branches.
- Most bushes live for several years.



raspberry bush



rose bush

## Herbs

- Herbs are small plants.
- They have soft green stems.
- Many common herbs live only for a few months.



mint



basil

## Vines

- Vines have weak stems.
- They cannot stand straight.
- They either grow along the ground, or grow up using a support.
- Many vines, such as peas and beans, live for only a few months.
- Others, such as a grapevine, live for a few years.



Do you have any plants in your home?  
Can you identify which type of plant is it?  
How many types of plants do you have in your home?



Peas



grapevine

### Remember

1. There are many kinds of plants.
2. Trees are tall and strong plants.
3. Bushes are smaller than trees.  
They have hard stems and many branches.
4. Herbs are small plants with soft green stems.
5. Vines have weak stems.  
They need support to climb up.



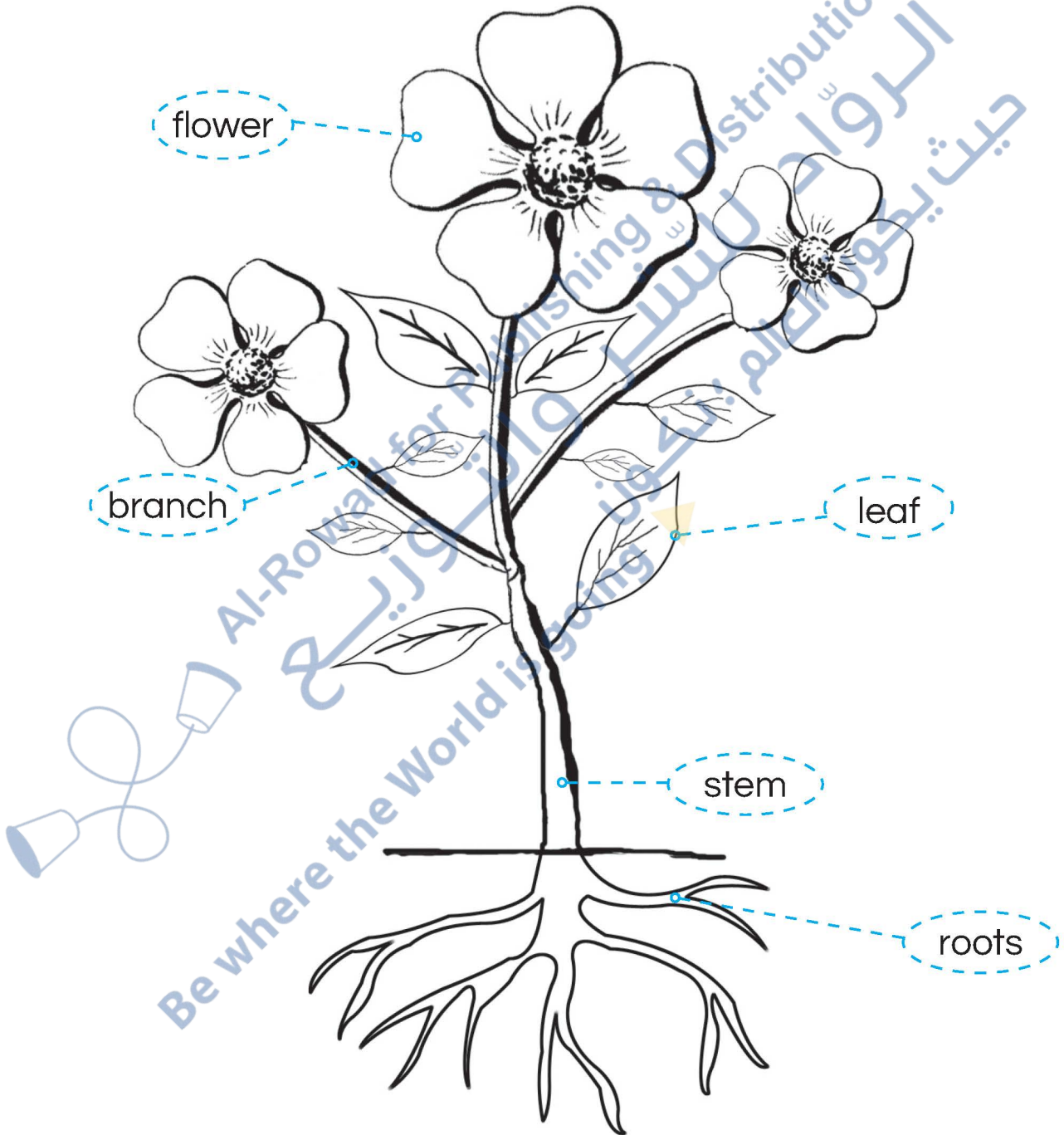
bean stalk

A plant is made up of different parts.



**Colour the stem and the branches brown.**

**Colour the leaves green and the flowers red.**



 Write the names of any three plants that live for only a few months.

\_\_\_\_\_

 Write the names of any three plants that live for several years.

\_\_\_\_\_

 What are these called?

a) very small plants: \_\_\_\_\_

b) plants with weak stems: \_\_\_\_\_

c) plants with soft green stems: \_\_\_\_\_

d) plants with thick brown stems: \_\_\_\_\_



## Project

 **Make a plant scrapbook.**

Collect pictures of plants and paste them in a scrapbook.

Give each plant two pages.

1. Below each plant, draw a picture of its leaf and flower.
2. On the opposite page, write what type of plant it is. Leave some blank space on each page.

As you learn more about plants, write more about them and draw pictures in the blank spaces.



We eat every day.

We need food to get energy and to grow.

Our food is cooked in the kitchen.

Do you know where this food comes from?



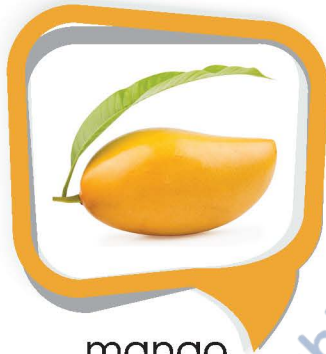
There are many animals and plants to give us food.

Do you know what plants give us food?

Plants need food to grow, they use their leaves to make food.  
Some food is used up by the plants.  
The left over food is stored in different parts of the plant.  
This is what we eat.  
Many plants store food in their fruits.



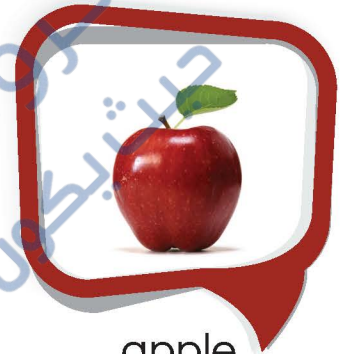
banana



mango



pineapple



apple

Some plants store food in their leaves. We eat the leaves of many plants.

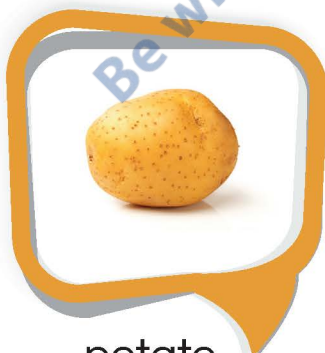


cabbage



spinach

Some plants store food in their stems. We eat the stems of many plants.



potato



onion

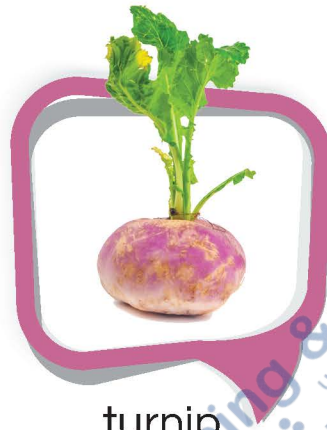


sugarcane

Some plants store food in their roots.  
We eat the roots of many plants.



radish



turnip



carrot

Plants have seeds that grow into new plants.  
We also eat many of these seeds.



rice



barley



maize



wheat



oats

**Remember**

1. Plants make food, they use some of the food.
2. The rest of the food is stored in fruits, leaves, stems, roots and seeds.
3. This is what we eat.