

BOOK

E

SCIENCE BASICS

Essential



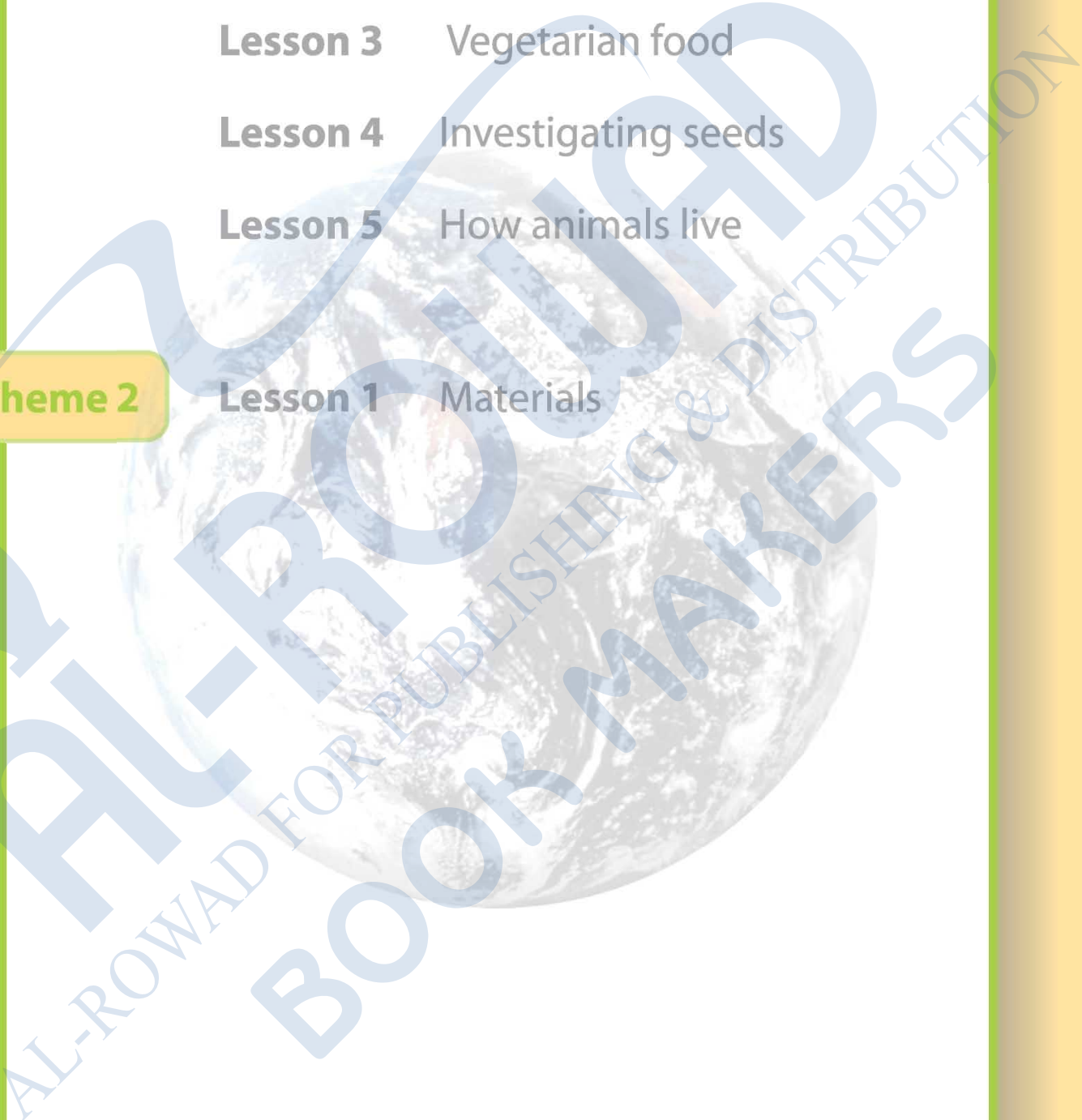
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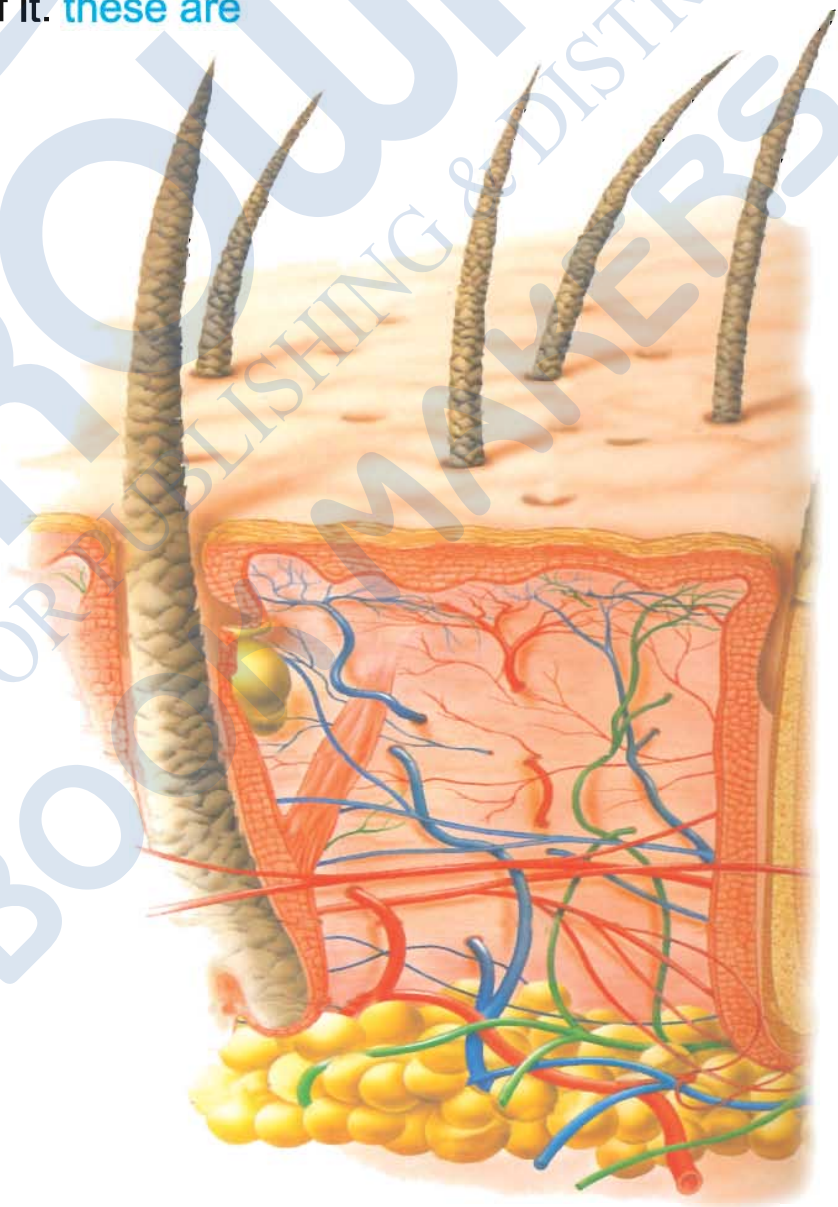
Our body

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

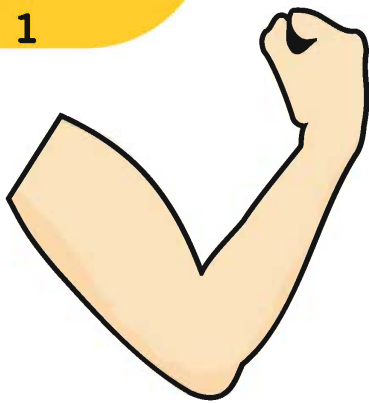
Let's learn about our skin.

Our skin is a layer of tissue that covers the whole of our body.

If you look closely at your skin, you can see little hairs growing out of it. **these are to keep you warm.**



Lesson 1



Our skin differs in density from one part to another. The thinner part is under your eyes. **Here the skin is very thin.**

The thickest part is on the soles of your feet. **Here the skin is very thick.**

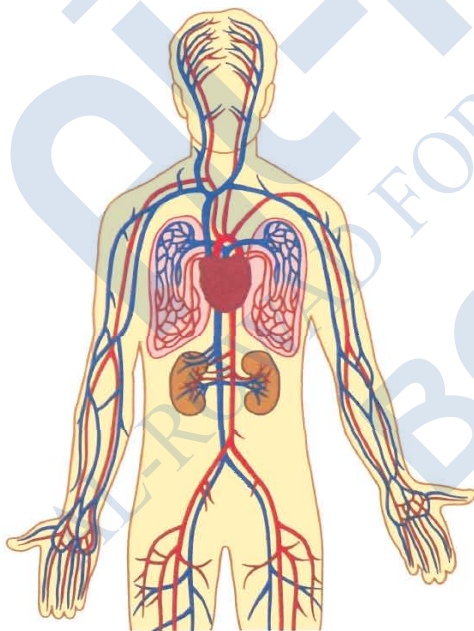
- **Look for some other differences over your body.**
- **Look for different textures in your skin.**
- **Look for colour differences on your body.**

Can you 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.

**INVESTIGATE**

How many parts of your body can you name?

Do all living things have bones and muscles?

What kind of skin do you have? Is it oily or is it dry?

Can you make a long jump? For how long can you make it?

Bones support you. They hold you up.

Just think if you have no bones, **what would happen.**

Let's look at our hand; if our 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 skeleton has 206 bones.

It is the skeleton that gives us our structure.

Our skeleton bones are all joined together. These are called **Joints.**

Having these joints allow us movement in different parts of our bodies. We can move lots of joints at the same time.

Try moving your hands and legs at the same time.



Interesting Facts about your body

Allah has given us special designs on the skin of our fingers. These designs are called fingerprints. Every human being has a unique and different fingerprint. An adult has about 206 bones in the body, but a baby has over 300. Some of these bones join together as the baby grows older. You have about 650 muscles in your body. The biggest are in your bottom and the smallest are in your ears.

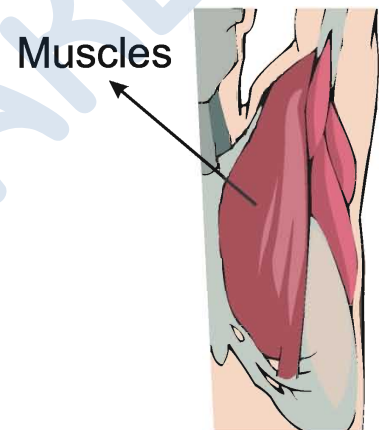
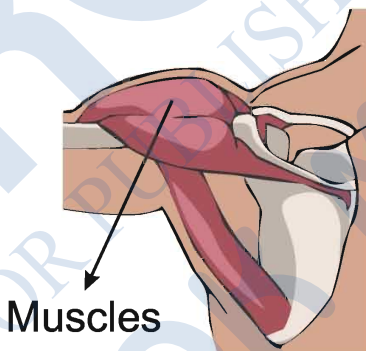
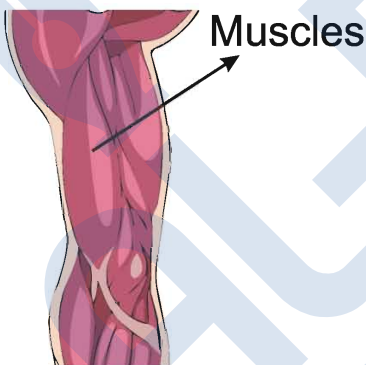
Muscles are attached to the bones.

We use them to move the bones.

We use muscles called biceps to move our arms.

We need strong muscles to run fast 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 over one another.
5. We use our muscles to move the joints.



1. Name these:

- a) The hard parts of our body. _____
- b) We use them to move the joints. _____
- c) It covers our entire body. _____
- d) It makes the structure of our body. _____

2. How can you make your muscles strong?

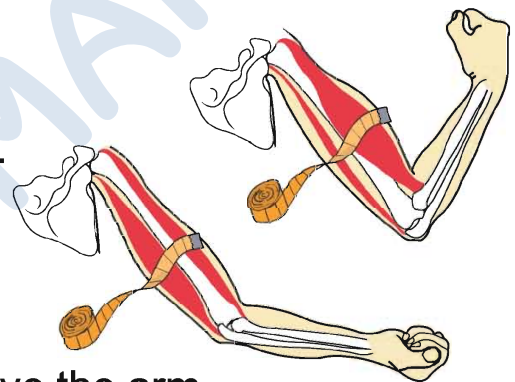
3. What do you think would happen if:

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

Project

1. Measuring biceps

Ask a friend to extend his or her arm.
 Measure the thickness around the upper arm.
 Now ask him or her to bend their arm.
 Measure the thickness of the arm again.
 Do you see any difference?
 The biceps become shorter and harder to move the 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

2. Take your fingerprints

- You can take your own fingerprints.
- Press your fingerprints on an ink pad.
- Now press your fingerprints 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.

Plants around us

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

Trees

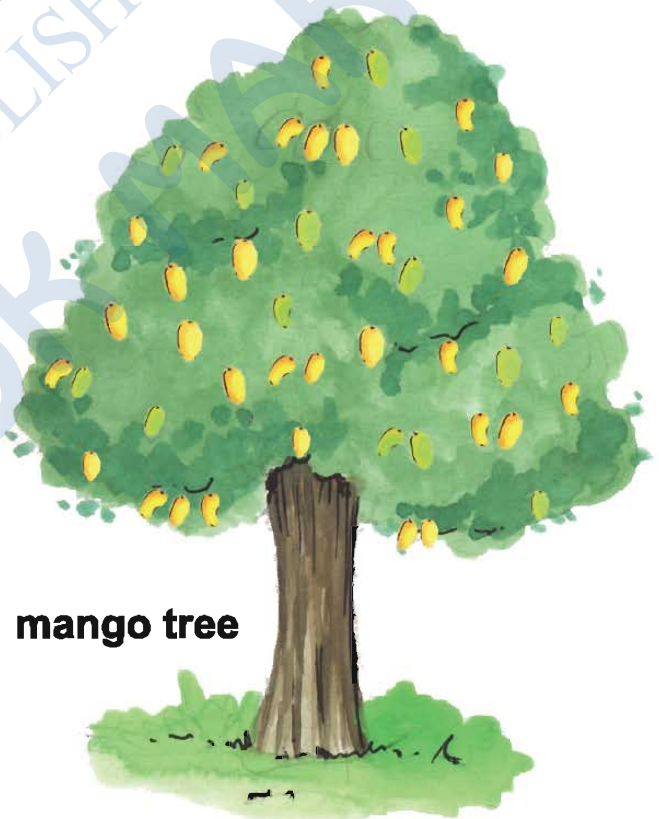
Tall and strong plants are trees.
They have a thick brown stem called a trunk.
They have many branches.
They live for many years.
A palm tree can live for hundreds of years.



fir tree



palm tree



mango tree

Lesson 2

Shrubs

Shrubs are smaller than trees.

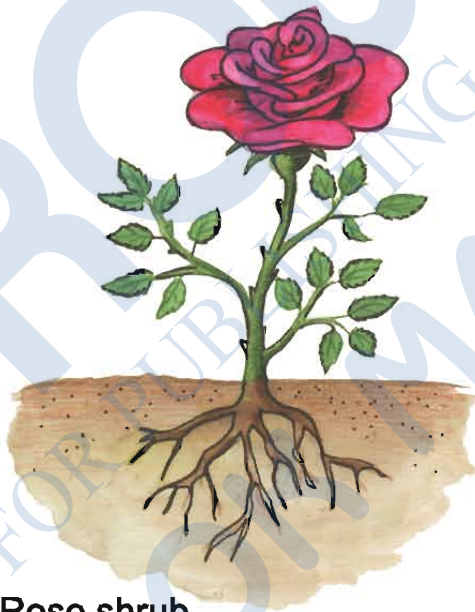
They have hard stems.

They have many branches.

Most shrubs live for several years.



Evergreen shrub



Rose shrub



Cotton shrub