CHAPTER – 19

ABDUL IN THE GARDEN

Page No 159:

Question 1: Why do you think the *neem* tree did not fall despite the strong wind?

Answer:

The *neem* tree did not fall despite the strong winds because it was deeply rooted. Roots anchor the plant body to the ground.

Question 2: On putting water in the soil where the plants are growing, the droping leaves become fresh again. How?

Answer:

This is because the water in the soil is absorbed by the roots. The stem carries this water to the leaves. This water creates pressure on the walls of the leaves and as a result, the leaves turn fresh again. Also, water helps the plants to make their food and look green and beautiful.

Question 3: What do you feel, do all plants need water?

Answer:

All plants need water for the following purposes:

1. For the preparation of their food
2. To transfer the nutrients from the soil to the different parts of the plant
3. To keep the plant cool

Thus, all plants need water for their survival.

Water is a necessary conduit for the transfer of nutrients from the soil and into the root system. Without it, the soil's nutrients could not be absorbed by the plant. – See more at: http://www.growinganything.com/why-do-plants-need-water.html#sthash.dRjft3hm.dpuf

Water is a necessary conduit for the transfer of nutrients from the soil and into the root system. Without it, the soil's nutrients could not be absorbed by the plant. – See more at: http://www.growinganything.com/why-do-plants-need-water.html#sthash.dRjft3hm.dpuf

Water is a necessary conduit for the transfer of nutrients from the soil and into the root system. Without it, the soil's nutrients could not be absorbed by the plant. – See more at: http://www.growinganything.com/why-do-plants-need-water.html#sthash.dRjft3hm.dpuf

Question 4: Which of the plants around you need regular watering?

Answer:

The plants around us that need regular watering are as follows:

1. Plants with large or very thin leaves
2. Plants in a warm, dry and sunny location
3. A large plant in a small pot
4. Flowering plants and rapidly growing plants
5. Plants growing in clay pots as compared to those growing in plastic pots

Examples: *Tulsi,* tomatoes etc.

Question 5: What will happen, if nobody gives water to these plants?

Answer:

If nobody gives water to these plants, their leaves and other parts will get dried up. Their growth will stop and they will finally die.

Question 6: Abdul realised that he never watered the huge neem tree. "Where did it get its water from?" he thought. Which of the plants around you do not need watering? Where do they get water from? Make two guesses.

Answer:

The roots of big trees such as *neem* have large roots that cover a huge area and penetrate deep into the soil. Such roots absorb the available water from the soil regularly. So, such plants do not need watering. Examples of such plants include *peepal*, mango, etc.

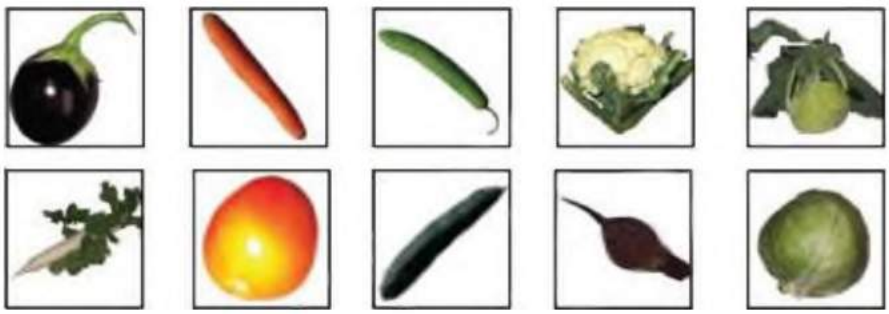
Page No 160:

Question 1: Abdul wondered whether radish was a root. Why did he think so?

Answer:

Abdul observed that radish grew under the ground like the roots of other plants and that it had to be pulled out of the soil. This made him wonder whether radish was a root.

Question 2: Look at the pictures below and find out which of these vegetables are roots.



Answer:

The following vegetables are roots:

Radish Carrot Beetroot

Question 3:

❄ How deep must the roots of this plant be going?

❄ How do the roots get water?

❄ How big will this plant grow?

❄ What will happen to the wall?

❄ Can you give the name of the plant in the picture?

Answer:

❄ The roots of the given tree might be equal to the width of the wall.

❄ Walls can absorb water either from its foundation or rain. The roots of plants get water from such walls.

❄ If this plant is able to survive, it will grow up to a few metres.

❄ Cracks will be developed in the wall and if the plant is able to grow continuously, the wall is most likely to break.

❄ The plant in the picture is known as *peepal*.

Page No 161:

Question 1:

O Would someone have uprooted such a big tree or would it have fallen on its own?

O How old would this tree be?

O Abdul on seeing a tree surrounded by cemented ground, thought that how will it get rain water?

Answer:

O The tree seems to be very old. Chances are that someone must have uprooted it. However, it is also possible that some very dangerous cyclone or earthquake led to this.

O The tree appears to be more than 100 years old.

O When it rains, the soil under the ground gets wet and the tree absorbs that water.

Question 2:

O Which are the oldest trees in your area? Find out from your elders how old the trees are?

O Have you ever seen any big tree that had fallen down? What did you think when you saw it?

Answer:

Disclaimer: *The purpose of this section is to encourage the students to observe their surroundings. It is highly recommended that the students prepare the answer on their own.*

Page No 163:

Question 1: What difference did you observe in the seeds after soaking? Compare with dry seeds and write.

Answer:

When the seeds are soaked, they become soft and start swelling. The soaked seeds are softer and bigger in size as compared to the dry seeds.

Question 2: What do you think would happen if the cotton wool had been left dry?

Answer:

Seeds need moisture to germinate into new plants. If the cotton wool had been left dry, then the seeds would not have received enough moisture. As a result, germination would not have been possible.

Question 3: In which direction did the roots grow? And the stem?

Answer:

The roots grew in the downward direction towards the earth, while the stem grew in the direction opposite to that of the roots, i.e. away from the earth.

Question 4: How big did the plant grow in the cotton wool?

Answer:

The plant that grew in the cotton wool was only a few centimetres long.

Question 5: Did small plants come out from all the seeds?

Answer:

No, small plants did not come out from all the seeds. Some of the seeds were not able to get enough water, air and warmth to grow into small plants. Also, some seeds were not healthy and so even after getting enough water, air and warmth, small plants did not come out of them.

Page No 164:

Question 1: What is the colour of the roots?

Answer:

Generally, the colour of the roots is white or brown.

Question 2: Did you see any hair on the roots?

Answer:

Yes, there was hair on the roots.

Question 3: Try and pull out one little plant from the cotton wool. Were you able to pull it out? Why?

Answer:

It was difficult to pull the little plant out of the cotton wool without damaging it. This is because the hair on the roots of the little plants held on to the cotton wool firmly.

Question 4: Did you see how the roots grip the cotton wool? Do you think that the roots hold the soil in the same way? Also look at the plants grown by your friends.

Answer:

Yes, the roots gripped the cotton wool. The roots hold the soil more firmly because the soil is more compact than the cotton wool.

Page No 165:

Question 1:

O Has your height increased? How much taller have you grown in the last one year?

O Imagine that you had never cut your nails! Draw a picture of your fingers in the notebook to show how they would have looked.

O What other part of your body keeps growing? Some people cut it regularly.

Answer:

Disclaimer: *The purpose of this section is to enhance the students' sense of observation. Keeping this in mind, it is strongly recommended that the students perform the activity and draw conclusions on their own.*