

Chapter 19: Abdul in the Garden

NCERT · Class 4 · EVS

Abdul in the Garden

Question 1

The stick which was stuck in the ground fell very easily. It was difficult to pull out a small grass. Why?

Solution

The roots of the grass were firmly holding the grass with soil, whereas the stick has no roots; hence, it is difficult to pull out small grass.

Question 2

Do all plants have roots?

Solution

Yes, all plants have roots.

Question 3

Look at some plants and trees around you. Imagine how deep and spread out the roots of these are.

Solution

The roots of plants are two inches to ten inches deep, while the roots of a tree are five feet to ten feet deep. Also, the roots of some trees go as deep as 50 feet into the earth.

Question 4

After three days, Abdul saw that one broken part of the pea plant had dried. Guess which part would have dried up? Why?

Solution

The leaves of the broken part of the pea plant would have dried up. This is because the broken part of the plant did not get water and minerals from the soil.

Question 5

Why do you think the neem tree did not fall despite the strong wind?

Solution

The roots of the neem tree are big, strong and deep, which anchors the tree strongly. Hence, this is the reason why the neem tree did not fall in spite of the strong wind.

Question 6

On putting water in the soil where the plants are growing, the dropping leaves become fresh again. How?

Solution

The water from the soil is transported to the leaves and other parts by the roots. Due to this, dropping leaves become fresh again.

Question 7

What do you feel, do all plants need water?

Solution

Yes, all plants need water.

Question 8

Which of the plants around you need regular watering?

Solution

Flowering plants need regular watering.

Question 9

What will happen if nobody gives water to these plants?

Solution

These plants will die if nobody gives water to them.

Question 10

Abdul realised that he had 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.

Solution

This is because the roots of the neem tree go deep into the soil and suck water from the soil. Also, other big trees, like mango, banyan, etc., do not require us to water them.

Question 11

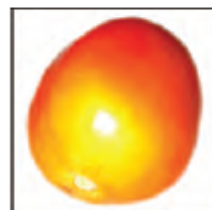
Abdul wondered whether radish was a root. Why did he think so?

Solution

Abdul was right to have wondered that radish was a root. The small roots on the radish and the fact that the radish grows under the ground must have made Abdul think that it is a root.

Question 12

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



Solution

The following vegetables are roots.



Carrot



Radish



Beatroot



Root cabbage



Abdul has more Questions

Question 1

How deep must the roots of this plant be going?

Solution

The roots of this plant would go up to at least 10 inches to 20 inches deep.

Question 2

How do the roots get water?

Solution

The roots get water from the moisture present in the wall.

Question 3

How big will this plant grow?

Solution

The plant can grow up considerably big.

Question 4

What will happen to the wall?

Solution

The wall will crack and finally break if the plant is not removed.

Question 5

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

Solution

The name of this plant is the peepal plant.

Question 6

Have you ever seen a plant growing from a crack in a wall?

Solution

Yes, I have seen a plant that grew over the wall of my grandmother's house.

Question 7

Where was it?

Solution

It was on the back wall of her house.

Question 8

Did you have any questions when you saw it?

Solution

Yes, I had one question in my mind when I saw it.

Question 9

What were some of your questions? Ask elders and find the answers. Find out the name of the plant you saw.

Solution

The question that I had in my mind was, "From where did the seed of that plant come on the wall." The answer I got from the elders was, "The seed of that very plant was carried by a bird to the wall." The name of the plant I saw was the banyan plant.

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Question 1

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

Solution

Strong winds or natural disasters could have uprooted that tree.

Question 2

How old would this tree be?

Solution

This tree would be no less than 50 years old.



Question 3

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

Solution

This tree gets water through its roots which go deep into the soil.

Let us talk

Question 1

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

Solution

There is a huge banyan tree at the bank of a pond in my native village. People say it's more than 150 years old.

Question 2

Name animals who live on this tree.

Solution

Monkeys, squirrels, sparrows and crows live on that tree.

Question 3

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

Solution

Yes, I have seen a big tree that had fallen down on the bank of the river because of the flood. I was just amazed to see the huge, thick and long roots of that tree.

Unusual Roots

Question 1

Have you swung from a banyan tree?

Solution

Yes, I always swing from a banyan tree with my friends whenever I visit my village.

Question 2

What did you hold to swing?

Solution

I hold the rope like thick structures which is hanging from the branches of the tree.

Question 3

Have you seen any tree which has roots growing from its branches?

Solution

Yes, the big banyan tree near my home and the one in my village have several long roots-like structures growing from its branches.

Let us do this

Question 1

Did you observe the seedlings come out of the seeds?

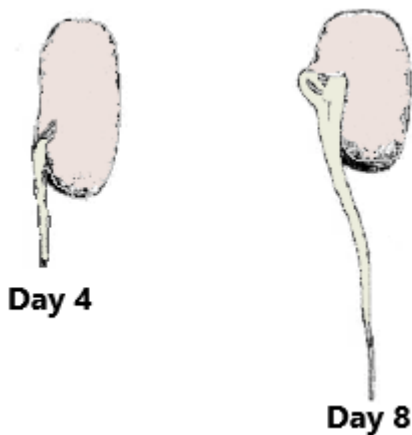
Solution

Yes, I observed that seedlings come out of the seeds.

Question 2

Draw the picture of the seedling as it looks on the fourth and the eighth day.

Solution



Write in your notebook

Question 1

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

Solution

I observed that the seeds, after soaking, get swollen and sprouted after two days, while the dry seeds did not get swollen or sprout.

Question 2

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

Solution

If the cotton wool had been left dry, then the seeds would not sprout.

Question 3

In which direction did the roots grow? And the stem?

Solution

The roots grew in the downward direction, and the stem grew in the upward direction.

Question 4

How big did the plant grow in the cotton wool?

Solution

The plant grew up to a height of 4 cm.

Question 5

Did small plants come out from all the seeds?

Solution

Yes, small plants did come out from all the seeds.

Question 6

What is the colour of the roots?

Solution

The colour of the roots is off-white.

Question 7

Did you see any hair on the roots?

Solution

Yes, I notice the hair on the roots after 8 days.

Question 8

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

Solution

Yes, I was able to pull out, but with much effort, as the roots made grip with the cotton.

Question 9

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.

Solution

Yes, I did see how the roots grip the cotton wool. Yes, I think roots hold the soil in the same manner. Also, the roots of the plants grown by my friends also made grip with the cotton wools.

What Grows?

Question 1

What do you think? Which of these things listed by Arif and Roopali grow?

Solution

All the things listed by Arif and Roopali will grow.

Question 2

Why don't you make your own list of things that grow?

Your list can include the names of things that are on Arif's and Roopali's lists.

Solution

Cats, dogs, rats, plants, lizards, hair, nail, etc., grow.

Question 3

Think about yourself – in what ways have you changed over a period of time? Have you grown in any way? For example –

Solution

Yes, I have grown bigger.

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

Yes, my height has increased by 10 cm in the last one year.

(b) What other part of your body (some people cut it regularly) keeps growing?

Our hair keeps growing.

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