

Chapter 18: Too Much Water, Too Little Water

Discuss

Question 1:

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How can unclean or dirty water harm our body?

Answer:

Water that is unclean or dirty contains many disease-causing germs. These germs cause different ailments like diarrhoea, cholera, stomach infections, and skin diseases.

Question 2:

Have you ever got dirty or unclean water in your area? What was the reason for this?

Answer:

Yes, we got dirty water in our area for a few days last year due to the floods.

[Students should mention their experience based on the above lines.]

Question 3:

Do you know anyone who has fallen sick because of such water? Talk about this.

Answer:

Yes, my aunt suffered from diarrhoea because she drank unclean water. We had to call the doctor who gave her medicines. Due to this event, we started drinking boiled water at home.

[Students should mention their experience based on the above lines.]

Question 4:

When the guest came to Suguna's house, they offered him a cold drink, because they thought he should not drink such water. What do you think Suguna's family must be doing for their own drinking water?

Answer:

Suguna's family must be purifying the water by boiling it or adding alum to it. They might use a water purifier at home to purify the water and make it suitable for drinking.

Question 5:

The guest said he did not take cold drinks. Why do you think he said this?

Answer:

I think he did not take cold drinks because these are not good for our health or the guest might be suffering from diabetes in which case he should avoid cold drinks they contain sugar.

Read and Write

Question 1:

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Have you ever faced a shortage of water in your house? When?

Answer:

Yes, we had faced a shortage of water last year. Some underground pipes had got damaged, and the repair work took three days to complete. Every household in our locality faced this water crisis.

[Students should mention their experience based on the above lines.]

Question 2:

What did you do then?

Answer:

We took water from a nearby pond and used it for different activities apart from drinking as it was not suitable for drinking. So, we had to buy packaged drinking water from the shops for those three days.

[Students should mention their experience based on the above lines.]

Question 3:

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Have you ever played in water? Where and when?

Answer:

Last month I visited an amusement park with my family, which had many water-themed rides. There I played with water.

[Students should mention their experience based on the above lines.]

Question 4:

Are there times when you are not allowed to play in water?

Answer:

My parents do not allow me to play in the water in the evening because they think I might fall sick.

[Students should mention their experience based on the above lines.]

Question 5:

What are the reasons for this?

Answer:

If I play with water outside, I shower after coming back home. My mother says if I take a shower in the evening, I may catch a cold and fall sick.

[Students should mention their experience based on the above lines.]

Question 6:

Have you seen wastage of water in your area? Discuss.

Answer:

Yes, I have seen the wastage of water in my area by people who do not turn off the public water tap after using it. They either forget to do that or are too ignorant about water wastage.

[Students should mention their experience based on the above lines.]

Question 7:

The water park had a lot of water to play in but the nearby village people did not have water even to drink. Think about it and discuss.

Answer:

The water park has sufficient water for playing, but the nearby village does not have water even to drink. Such a situation arose because of improper management of water by the local municipal authority. The water park is a private property that has been built to generate profit. So, the water park management authorities pay extra to acquire large amounts of water. On the other hand, the villagers do not have such means.

Question 8:

If you go to a water park, find out from where the water comes to the park.

Answer:

I went to a water park called Aqua World in my city. There is a large lake nearby from where they source water to the park.

[Students should mention their experience based on the above lines.]

Write in your notebook

Question 1:

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Why was Raziya worried when she read the newspaper?

Answer:

Raziya was worried after reading the newspaper because she got to know that the gutter water had mixed with the water in the drinking water pipes. As a result, people were suffering from diarrhoea and vomiting.

Question 2:

Raziya asked that all the water that was filled the previous day should be thrown. Could this water have been used for something else? What kind of things?

Answer:

Instead of throwing, the dirty water could be used for cleaning purposes like wiping the floor or washing the car.

Question 3:

In what way did she plan to clean the water?

Answer:

She planned to clean the water by boiling it properly.

Question 4:

Do you know of different ways to clean the water? Describe them.

Answer:

Yes, dirty water can be cleaned by boiling, filtering, or adding alum/chlorine.

[Students should mention their experience based on the above lines.]

Question 5:

Suppose, Raziya had not read the news and everyone had drunk the water without boiling it, what could have happened?

Answer:

If Raziya had not read the news, everyone would have drunk that dirty water without boiling it and eventually suffer from diarrhoea and vomiting.

Discuss

Question 1:

Where Deepak lives, everyone has to stand in a queue to fill water from the common public tap. In Raziya's house, water comes all day in the tap. Why is this?

Answer:

Deepak lives in a slum area where water is not available all day and night, and they have to collect water from one common tap. Such basic amenities are not available there. However, Raziya lives in an area in Mumbai where all the basic amenities like the availability of drinking water are present.

Question 2:

Raziya read news about the water in the newspaper. Have you read any news about water in the newspapers? What kind of news?

Answer:

A few days back I saw a news report about pollution and the appearance of froth in the Yamuna River.

[Students should mention their experience based on the above lines.]

Do and Discuss

Question 1:


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Look through the newspapers of the last one month. Look for all news-items related to water. Cut them out. Stick all the cuttings together on a big paper to make a big collage. Talk about what you have collected. Discuss in the class.

Answer:

NEWSPAPER COLLAGE

THE DIRTY PICTURE




Source of phosphates & surfactants

- Phosphates are extensively used in the treatment of boiler water and orthophosphates are applied to agricultural or residential cultivated land as fertilisers. These are carried into the water
- Surfactants enter water mainly through discharge of aqueous wastes from households, industrial laundering and other cleansing operations

How foam is formed

The phosphoric compounds in normal cases get settled in the sludge/riverbed. On release of water from barrage/reservoir at a particular height, the settled compounds get agitated and foam forms

Record spells | A look at rainfall statistics for the last week in Chennai



- Between November 7 and 12, Chennai received 46 cm of rainfall. This is nearly 491% more than the normal quota of 8 cm in the city for the period
- Chennai district has so far recorded 81 cm rainfall for the NE monsoon since October 1. It is 85% excess
- Nungambakkam has already crossed its yearly quota of rainfall. It has received 170 cm against the annual average of 140 cm
- Meenambakkam has recorded 156 cm so far against annual average of 138 cm

Action taken by DPCC

No. of industries/units inspected in November for froth formation in the Yamuna	192
No. of industries/units not having ETPs	18
No. of ETPs found non-operational	15
No. of industries/units found violating norms	57

I have searched the last month's newspapers and collected two reports related to water issues.

In the collage, the first newspaper cutting is about pollution and the appearance of toxic foam in the Yamuna River. The report says that toxic foam is appearing because of phosphates and surfactants.

The second report is about how excessive rainfall in Chennai has caused floods in many localities in the city. The report says that the city received 46 cm of rain which is 491% more than the normal quota of 8 cm in the city for the period.

[Students should mention their experience based on the above lines.]

Question 2:

Have you ever suffered from diarrhoea and vomiting? How did you feel?

Answer:

Yes, I have suffered from diarrhoea and vomiting. It was not a good feeling as I felt weak and nauseous. I could not eat properly for quite a few days.

[Students should mention their experience based on the above lines.]

Water Survey in School

Make three groups of students in your class.

- One group will find out about the arrangements of drinking water in the school.
- The second group will find out about the arrangement of toilet in the school.
- The third group will find out about illness affecting children in the class.

The questions given below will help the groups to collect information.

Group 1

Observe and Note –

Put a (✓) in right box or boxes

Question 1:

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Where does the water in your school come from?

Tap	Tank	Handpump	Any other
-----	------	----------	-----------

Answer:

Tap	Tank	✓	Handpump	Any other
-----	------	---	----------	-----------

[Students should mention their experience based on the above lines.]

Question 2:

In your school, from where do you take water to drink?

Tap		Tank		Handpump		Any other	
-----	--	------	--	----------	--	-----------	--

Answer:

Tap	✓	Tank		Handpump		Any other	
-----	---	------	--	----------	--	-----------	--

[Students should mention their experience based on the above lines.]

Question 3:

If there is no tap, *matka* or handpump, then how do you get drinking water?

Answer:

If there is no tap, *matka* or handpump we get drinking water from movable water tankers.

[Students should mention their experience based on the above lines.]

Question 4:

Is there water in all the taps or handpumps?

Answer:

Yes, water is available in all the taps of our school. We have no handpumps on our school premises.

[Students should mention their experience based on the above lines.]

Question 5:

Is there any tap which is leaking or dripping?

Answer:

We have six water taps in our school, out of which two are leaking.

[Students should mention their experience based on the above lines.]

Question 6:

Are all the *matkas* filled with water and are they covered?

Answer:

Yes, all the *matkas* are covered properly when they are filled with water.

[Students should mention their experience based on the above lines.]

Question 7:

Are the *matkas* and other water containers cleaned regularly?

Answer:

Yes, the *matkas* and water containers are cleaned regularly.

[Students should mention their experience based on the above lines.]

Question 8:

How is water made safe for drinking?

Answer:

Cleaning staff at our school add chlorine tablets and alum in the overhead water tanks to make the water safe for drinking. We also have water purifiers at school.

[Students should mention their experience based on the above lines.]

Question 9:

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Is there a long-handled ladle to take water from the *matka* or container?
How many ladles are there per container?

Answer:

Yes, there are long-handled ladles that help us take water from the containers. We have one ladle per container.

[Students should mention their experience based on the above lines.]

Question 10:

Is the place around the drinking water-taps or *matkas* cleaned regularly?

Answer:

Yes, the areas around the drinking water-taps are cleaned regularly.

[Students should mention their experience based on the above lines.]

Think and Discuss

Question 1:

Why do the drinking water places get dirty?

Answer:

The drinking water places get dirty because the students spill water while fetching it, and sometimes, few students wash their hands using that water.

[Students should mention their experience based on the above lines.]

Question 2:

What can we do to keep these places clean?

Answer:

We should not spill water while fetching it and avoid washing activities using the drinking water taps.

Find out and write in your notebook

Question 1:

How often (once a day, once in two days, etc.) are the containers or *matkas* and ladles cleaned? Who cleans them?

Answer:

Containers, *matkas* and ladles are cleaned every day. We have the cleaning staff in our school for doing these tasks.

[Students should mention their experience based on the above lines.]

Question 2:

How many children are there in your school? How many taps, *matkas* or handpumps are there? Are these sufficient for children?

Answer:

There are 370 students in my school.

We have twenty drinking water taps and three *matkas* at our school. I think these are sufficient for us.

[Students should mention their experience based on the above lines.]

Question 3:

Who cleans the places near the water?

Answer:

Our cleaning staff cleans the places near the water.

[Students should mention their experience based on the above lines.]

Question 4:

Where does the water that is spilt go?

Answer:

We have drainage pipes that collect the spilled water and direct it to the school garden.

[Students should mention their experience based on the above lines.]

Group 2

Observe and Note –

Put in the box and write wherever it is required –

Question 5:

What are the toilet arrangements in your school?

Built toilet		Open area	
--------------	--	-----------	--

Answer:

Built toilet	✓	Open area	
--------------	---	-----------	--

[Students should mention their experience based on the above lines.]

Question 6:

How many toilets are there?

Answer:

We have three toilets for boys and three toilets for girls on each floor.

[Students should mention their experience based on the above lines.]

Question 7:

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Are there separate toilets for girls and boys?

	Yes		No
--	-----	--	----

Answer:

✓	Yes		No
---	-----	--	----

[Students should mention their experience based on the above lines.]

Question 8:

Is there water in the toilets?

	Yes		No
--	-----	--	----

Answer:

✓	Yes		No
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[Students should mention their experience based on the above lines.]

Question 9:

Where does the water come from?

I. the tap

	Yes		No
--	-----	--	----

II. filled containers

	Yes		No
--	-----	--	----

III. has to be brought from home

	Yes		No
--	-----	--	----

Answer:

I. the tap

✓	Yes		No
---	-----	--	----

II. filled containers

	Yes	✓	No
--	-----	---	----

III. has to be brought from home

	Yes	✓	No
--	-----	---	----

[Students should mention their experience based on the above lines.]

Question 10:

Is there water for washing hands near the toilet?

	Yes		No
--	-----	--	----

Answer:

✓	Yes		No
---	-----	--	----

[Students should mention their experience based on the above lines.]

Question 11:

Do you wash your hands after using the toilet?

	Yes		No
--	-----	--	----

Answer:

✓	Yes		No
---	-----	--	----

[Students should mention their experience based on the above lines.]

Question 12:

Is there any tap that is leaking or dripping?

	Yes		No
--	-----	--	----

Answer:

✓	Yes		No
---	-----	--	----

[Students should mention their experience based on the above lines.]

Question 13:

Are the toilets kept clean?

	Yes		No
--	-----	--	----

Answer:

✓	Yes		No
---	-----	--	----

[Students should mention their experience based on the above lines.]

Find out and Write

Question 1:

How many boys and girls are there in your school?

Girls		Boys	
-------	--	------	--

Answer:

Girls	120	Boys	250
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[Students should mention their experience based on the above lines.]

Question 2:

How many toilets are there for girls, and how many for boys?

Girls		Boys	
-------	--	------	--

Answer:

Girls	10	Boys	10
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[Students should mention their experience based on the above lines.]

Question 3:

If there are no taps, who brings the water for the toilet? From where does the water have to be brought?

Answer:

We have water taps in our school, but if water is not available, our school staff brings water from the hand pumps near our school.

[Students should mention their experience based on the above lines.]

Question 4:

Who keeps the place clean?

Answer:

The place is kept clean by our cleaning staff.

[Students should mention their experience based on the above lines.]

Talk about it

Question 1:

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What can be done to keep the toilets clean?

Answer:

To keep our toilets clean we have to flush them properly after every use. Toilets need to be cleaned with cleaning liquids and phenyl every day by the cleaning staff.

Question 2:

What can each of us do for this?

Answer:

We should flush the toilet after every use and not wet the toilet floors unnecessarily.

Question 3:

Have you seen toilets at bus stands or railway stations? How are they different from the toilets at home?

Answer:

Yes, I have seen toilets at bus stands or railway stations. Many people use them and not all of them have the same sense of cleanliness. So, these public toilets are quite filthy and emit a bad smell. The toilets at our home are cleaner because only the family members use them and all obey the toilet manners.

Question 4:

Group 3

Talk with the children in your class and fill in the table given below. In the last few months, how many children in the class have suffered from any of these?

S. No.	Diarrhoea, loose motions	Vomiting	Loose motion & vomiting	Yellow urine, yellow (pale) skin & eyes, mild fever	Stomach ache
1.					
2.					
3.					
4.					
5.					

Answer:

S. No.	Diarrhoea, loose motions	Vomiting	Loose motion & vomiting	Yellow urine, yellow (pale) skin & eyes, mild fever	Stomach ache
1.	Nilu	Joseph	Shanti	Aashiya	Sangeeta
2.	Priya		Mahima		Paresh
3.					Shivesh
4.					Sunita
5.					

[Students should mention their experience based on the above lines.]

Question 5:

Discuss with your teacher what you have found out from your survey. Now make a report with your findings and suggestions. Read your report in the assembly. Put it up on the notice board.

Answer:

After finishing the survey, I realised that many students suffered from stomach aches. I think we need to check what kind of water we are drinking at school. Out of all those students, nobody brings water from home; they all drink water from the drinking water taps at school. Only one student named Ashiya had jaundice, because I think she drank contaminated water somewhere else, like at her home.

[Students should mention their experience based on the above lines.]