

We have come to know that garbage dumped in open is very dangerous for our health. Therefore, we must install dustbins in our homes.



For the teacher :

- Prepare two different coloured dustbins, eg., green and blue.
- Ask the students to collect things which are waste.
- Now select bio-degradable and non-biodegradable items separately.
- Educate students to collect bio-degradable items in green dustbin and non-biodegradable items in blue dustbin. Motivate them to carry on such practice at their homes also.



Things to Remember

- We should keep our houses neat & clean.
- Household waste should be managed properly.
- Bio-degradable and non-biodegradable items should be put separately.
- Most of waste things can be recycled.
- The dustbins should be kept in houses, parks, schools, hospitals, etc.



Q.3. Fill in the blanks :

(polythene, Dustbins, environment, fresh-air)

- a. Sun light and are necessary things in the house.
- b. Garbage causes harmful effects on health and
- c. We should minimise the use of
- d. should be used to put garbage.

Q.4. Tick (✓) the right and cross (x) the wrong sentence :

- a. Openly dumped garbage causes air pollution. ☐
- b. Garbage should be put in dustbins. ☐
- c. There should be maximum use of plastics. ☐
- d. Plastic bottles can be reused. ☐
- e. Rock Garden is situated in Ludhiana. ☐

Q.5. Tick (✓) the right answer :

- a. What is included in biodegradable waste ?

Plastic ☐ Paper ☐ Glass ☐

- b. What is included in non-biodegradable waste ?

Leaves ☐ Peels ☐ Polythene ☐

- c. Which of these is a cause of maximising garbage ?

Stray animals ☐ Urbanization ☐ Agriculture ☐

- d. Which garden is made by Sh. Nek chand Ji ?

Rock Garden ☐ Rose Garden ☐ Nek Garden ☐

e. What is produced from gobar?

Paper

Bio-gas

Card-board

Q.6. Match the Column :

(A)

Dustbin
Polythene
Concrete
Lintel
Rock-garden

(B)

Cement
Chandigarh
Roof
Envelops
Dustbin

Q.7. Answer the following questions in brief :

(a) What is a dustbin ?

.....
.....

(b) Write any one use of cleanliness ?

.....
.....

(c) What is included in biodegradable waste ?

.....
.....

(d) What is included in non-biodegradable waste?

.....
.....

(e) Why two different coloured dustbins are used ?

.....
.....

(f) What is meant by cleanliness ?

.....
.....

(g) Why is there increase in garbage ?

.....

.....

(h). What are the harmful effects of garbage ?

.....

.....

(i). How can garbage be managed ?

.....

.....

(j) What should we do to reduce waste ?

.....

.....

Know this

Children ! Do you Know cleanliness clubes are established for

Cleanliness Club
G. P. School, Udekaran

Club Chairman: Gurmeet Singh
Members Secretary: Dev Simrat Singh

Class I ERAMJEET II ASHMEET III PGOJA
IV VISHAYDEV V AFSHEEN KAUR

Duties and Responsibilities:

Sr.No.	Activity
1.	Cleanliness of school
2.	Cleanliness of surroundings
3.	Cleanliness of bathrooms

Our motto: Neat & Clean
Punjab

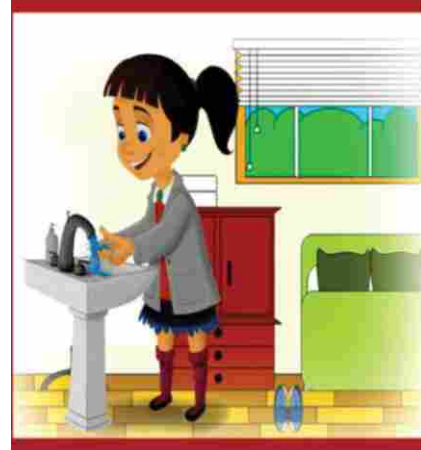
Cleanliness Club		
Cleanliness of Bathrooms	Make arrangements of MID DAY MEAL	Cleanliness of the school i.e. rooms & playground
NAME OF STUDENTS	NAME OF STUDENTS	NAME OF STUDENTS
MON HARNAM, GULAB SINGH	SANT SINGH RAVI KUMAR	GURVINDER SINGH RINKU DHAMIJA MANJEET SINGH
TUE MANDER SINGH SANDEEP SINGH	TEJ KAUR GURPREET	VERPAL KAUR JAGDEV SINGH
WED VIJAY KUMAR RAJPAL	KOMALPREET RAMU	JARNAIL SINGH SATNAM SINGH
THU TUSHAR AKASHDEEP	KAJOL NAVDEEP	GURNAIB SINGH GURSHARAN SINGH
FRI KULDEEP NEELAM	GOPY SINGH HAJINDER SINGH	AMANDEEP KAUR SURINDER CHUGH
SAT JASHAN RAJANI	AMIT NAGPAL KAMAL	RANJIV KUMAR SHAMJEE SINGH

cleanliness in the school.

The main purpose of the Cleanliness Club is to make children aware of cleanliness. The class students are the members of this club. The chairman and secretary of the club are elected from the children. The teacher incharge is the president of this club.

Following are the responsibilities of cleanliness club :

- To make the children punctual.
- To ensure the cleanliness of their uniform.
- To ensure the cleanliness of the classrooms and school.
- To ensure that all students wash hands before meals.



LESSON-16



WATER CONSERVATION

Dear Children ! do you know how much water is there on the earth ?

About 70% of earth's surface is water-covered. But it is not useful for us. We cannot use all this water for our daily use. Most of water is sea water. There is very little amount of water that we can use. We, unconsciously, cause a lot of damage to the water every day.

In old time, the agriculture had mostly been dependent on rain water, or the wells had been the source of irrigation. Due to insufficient sources of irrigation crops like oats, guar, gram were grown. These crops need less water.

After green revolution in Punjab, the cultivation of Paddy crops started which needed lots of water. Tubewells were dug to meet the need of water supply. Due to this, ground water level has been falling rapidly.

Q.1. What was the main source of irrigation in old times ?

.....
.....

International water day is celebrated on 22nd march every year



Well



Handpump



Tubewell

Due to low water level, most of the handpumps and wells have disappeared. Water Works Authority cleans canal water and supplies it to our homes. Due to an increase in population, urbanisation and industrialization, the demand of water has increased. As a result, water is supplied adequately. People are careless in using it. Water is used excessively for brushing,

bathing, washing dishes, cars, floors and clothes.

Q.2. How is ground water affected by the cultivation of paddy?

.....
.....

Q.3. What is the main source of irrigation in Punjab, now-a-days ?

.....
.....

Water is a renewable source. We can reuse it. We can save it by using it wisely for domestic purposes.

Water, left after washing the vegetables, could be used for watering the plants.

The utensils can be washed with the waste water of RO filter.

We can use bucket instead of pipe for watering the plants at home.

Although water is the gift of nature to us and it is the basic need of life, yet bills are paid to water works for its supply. Now we are buying the water. So, it is our duty to use water wisely. We should turn off the running taps not in use.



Q.4. Write any one way to conserve water at home.

.....
.....

Activity 2: Enlist the public taps in your village and note how many of them are not turned off after use.

For Teacher : Through this activity, motivate the students to turn off the tap immediately if it is found running without use. They should advise others also to do the same.

We will discuss below a few ways of saving water at home :

Sr.No.	Activity/Work	Wrong Way (Which shouldn't be done)	Right way (Which should be done)
1.	Brushing of Teeth	Keep tap running	Using water in mug
2.	Bathing (Under shower)	Running shower for long time	Use of mug and bucket
3.	Wash hands	Running tap	Half tap opened
4.	Car Wash	Using water with pressure of pipe	Use of mug and bucket
5.	Shaving	Running tap	Use of mug
6.	Cleaning Floor	Extra use of water with pipe	Use of bucket and wiper
7.	Washing Clothes	Running tap	Use of bucket/tub



Things to Remember

- Life is not possible without water.
- Water covers about 70% of Earth's surface.
- A meager part of whole of the water on Earth is drinkable.
- Water should be used wisely.
- Water should be saved in the houses.
- The underground water is going down due to the tubewells.
- Water is a renewable resource.



Q.5. Answer the following questions in brief :

- a. What measures should be adopted to minimise the use of water in agriculture ?

.....
.....

- b. What is the effect of submersible pumps on the use of water in houses ?

.....
.....

- c. Why can we not use water of ocean ?

.....
.....

- d. What is the proper way of using water while brushing/ bathing ?

.....
.....

Q.6. Tick (✓) the right option :

- a. Without which thing we can not survive ?

Chocolate ☐ Water ☐ Mobile ☐

- b. What percentage of Earth's surface is under water ?

65% ☐ 75% ☐ 70% ☐

- c. Underground water is drawn out with.....

Tubewell ☐ Pond ☐ Canals ☐

- d. How does the ocean water taste ?

Sweet ☐ Bitter ☐ Salty ☐

5. Which crop needs more water ?

Wheat

Peddy

Millet

Q.7. Fill in the blanks :

(water, down, less, save, submersible)

- a. We should water.
- b. There is a little on earth for use.
- c. People deploy pumps in houses.
- d. The crops like gram, millet and guwar need water.
- e. The level of underground water is going

Q.8. Tick (✓) the correct and cross (x) the wrong sentences :

- a. Conservation of water is essential. ☐
- b. Submersible pumps are deployed in houses to save water. ☐
- c. The level of underground water is going down rapidly. ☐
- d. We can use the salty water of ocean in houses. ☐
- e. Water is a renewable resource. ☐



Dear students, air, water and soil are the valuable gifts given by nature to man. But man does not use these natural resources wisely due to his selfishness. We often read in newspaper and watch on television about pollution. When some unwanted substances get dissolved in the pure water, it becomes dirty. This is called water pollution. As we cannot breath in the air polluted with smoke and dust, similarly, polluted water also becomes unuseful to us.

Domestic Use : We use the water daily for many domestic purposes. The water gets dirty after using it for brushing, toilet use, cleansing, bathing, washing dishes and clothes. In villages it is sent to ponds by way of open drains. With this, underground water also gets polluted by way of seepage.

There are many factories where a lot of dirty water comes out during production. This polluted water is flown to streams & canals without any treatment. e.g. in Ludhiana, 'Budha Nala' is polluted due to drainage of dirty water into it.



Polluted water being thrown into river.

There is an abundant increase in usage due to overpopulation and urbanisation. Some people wash clothes or bathe their animals near the clean water resources. Big cities have come into existence whose polluted water has become a problem. The water gets polluted also with the use of polythene.



Use of Fertilisers and Insecticides in Agriculture

These days, the farmers spray excessive fertilisers and insecticides in their fields for increasing yield. These are very poisonous. They poison the crops as well as the underground water by seeping from fields into the ground. Besides, the air also gets polluted with the mixing of poisonous particles into it.

Q.1. List the activities carried on by people near water sources that pollute the water ?

.....

.....

Activity 1: Try to Find out from Doctor or Staff of nearby Primary Health Centre of your village/city, which diseases are caused by drinking contaminated water and also find the number of patients suffering from these diseases. Note this information in your notebooks and discuss with your friends.

Water Treatment Plant

Dirty and polluted water emerging out of villages/cities can be reused



R.O. Filter



Water treatment plant

after cleaning e.g. water treatment plants are set in some places for the cleaning of sewage water. Water is cleaned with the help of chemicals and filters, and then it is used for irrigation or other such works.

We should always drink clean water. The water should be boiled and cooled before drinking. The germs inside water get killed after boiling it. Some people also use R.O. Water Filter in their houses to purify the water.

Bad Effects of Contaminated Water :

1. Diseases like Cholera, Dysentery, Diarrhoea are caused due to drinking contaminated water.
2. We get vomiting/loose motions by drinking contaminated water.
3. Our teeth get spoiled by drinking such water.
4. Sources of contaminated water cause foul smell which pollutes the air also.
5. Mosquitoes breed on stagnated water to spread malaria and dengue.

Prevention

Following steps should be taken to prevent water pollution :

1. There should be proper arrangement of sewage in villages and cities.
2. There should be an arrangement of cleanliness of sewage water in villages and cities.
3. Washing of clothes or bathing of animals should be prohibited near water resources.
4. Aware the farmers to use less insecticides.
5. Polythene should completely be banned.

Q.2. Which diseases are spread by mosquitoes ?

.....
.....

For Teacher : Acknowledge the students that they should drink O.R.S. solution in the dysentery.

Activity 2 :

Prepare ORS solution with the help of your teacher.



Cleanliness of Kali Bein

A river known as 'Kali Bein' is related to **Guru Nanak Dev Ji**. It was completely polluted due to garbage and waste water. **Baba Balbir Singh Ji Seechewal** took the initiative to clean it. He, along with his devotees, took out all the refuse and waste from the river and cleaned it. He planted many trees on the banks of the river. Now the beauty of this river is worth seeing. We also should participate in such works to conserve the water.



Things to Remember

- Man must use water wisely.
- Water pollution is increasing day by day.
- We have been adding garbage of our homes to our water resources.
- The spare & dirty water from factories is also being added to streams without cleaning it.
- The spraying of insecticides in the fields also pollutes the water.
- Many dangerous diseases may be caused by drinking contaminated water.
- We should do special efforts to prevent pollution.



Q.3. Fill in the blanks :

(Diarrhoea, cleans, dirty, Kali Bein, urbanisation)

- (a) The water gets after domestic use.
- (b) Due to, there is increase in water utilisation.
- (c) Water Treatment Plant the dirty water.
- (d) can be caused by drinking contaminated water.
- (e) is associated with Sri Guru Nanak Dev Ji.

Q.4. Tick (✓) the right and cross (×) the wrong sentences :

- (a) We are not responsible for water pollution. ☐
- (b) There should be a ban on the use of plastic bags. ☐
- (c) Nothing happens due to drinking contaminated water. ☐
- (d) Water is filtered by R.O. filter. ☐

Q.5. Tick (✓) the right answer :

- (a) Which one of the following is responsible for water pollution ?

Dust ☐ Polyethene ☐ Noise ☐

- (b) What gets polluted by spraying of insecticides ?

Air ☐ Water ☐ Both ☐

(c) Which water body has been cleaned by Sant Balveer Singh Seechewal :

Ganga River ☐ Kali Bein ☐ Satlej River ☐

(d) Which disease can be caused by drinking contaminated water ?

Cholera ☐ Malaria ☐ Dengue ☐

Q.6. Write the answers of the following in brief :

(a) Write any two reasons of water pollution.

.....
.....

(b) Name the diseases caused by drinking polluted water.

.....
.....

(c) Write two methods of cleaning water.

.....
.....

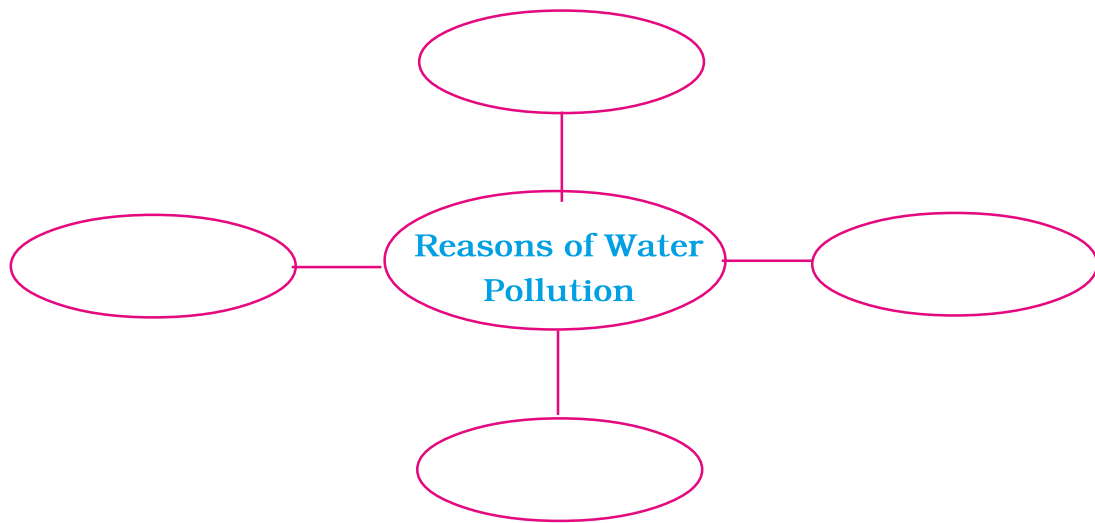
(d) What is added to water to prepare ORS ?

.....
.....

(e) Write two methods of stopping water pollution.

.....
.....

Q.7. Mind Mapping



LESSON-18

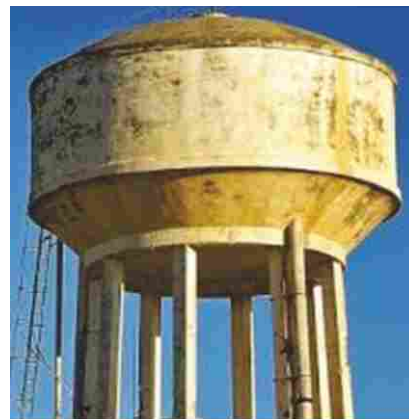


WATER MANAGEMENT

Students, water is a precious gift of nature. It needs care. We can conserve water by stopping its misuse and minimising the water pollution.

Water Management

Water works department supply water to our homes. Underground water is stored in a big tank with the help of big tubewell, in water works. Where there is no drinkable underground water. The canal water is supplied to the houses after cleaning. Very big treatment plants are implanted with which impurities of water are removed and water is cleaned. Chlorine is also added to water to eradicate the micro-organisms.



Big Tank

Q.1. From where does the water come in big tank ?

.....
.....

Sometimes, the water of water works also gets polluted. Due to leakage of water pipes, contaminated water gets mixed with clean water. So, the people have installed R.O. System in their houses with which water is filtered.

Water and Sanitation Department of Punjab checks the quality of water in schools regularly so that the students get clean drinking water.



R.O. System

**Q.2. Is the water of your school checked ever ?
Who checks it ?**

.....
.....

Water Storage

Maximum areas have been supplied water by Water Works Department. There is not a continuous supply of water in many areas. Water Works Department supplies it at fixed and regular intervals. So, the water needs to be stored.

There are many ways of water storage :

1. Earthen pitchers are used for storage of drinking water in villages; where water remains naturally cool.
2. Some people construct troughs in their houses or manage open places



Pitcher



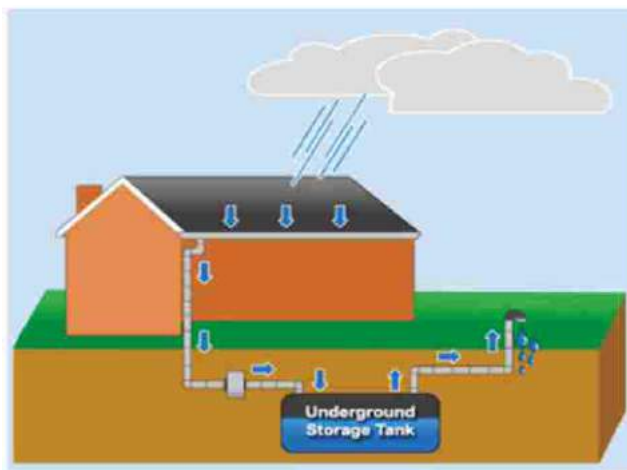
Water Tank

for animals to drink water.

3. People living in towns/cities keep big water tanks on the roof tops of their houses. From there water is supplied to other places like bathroom, toilet, kitchen, etc.
4. Some people use buckets, tubs, plastic boxes, earthen pots, etc., to store water.

Rainwater Harvesting

To maintain the level of ground water, it is necessary to conserve rain water. Rain water harvesting is the best way to use the rain water, instead of letting it flow in the drains. For conservation of rain water, a drain pipe is attached from roof top to the borewell, from where water is sent under the ground. When it rains, the water goes from the roof tops to the borewells through the pipes. It will help prevent the level of ground water from falling.



RWH

Q.3. Can rain water be harvested ?

.....
.....

Activity 1 :

Collect the rain water directly in a bucket and check after sometimes if this water is clear or not.

For Teacher : Clarify to the students that dust particles from air gets mixed with rain water. Therefore, the rain water is not directly usable. It should be cleaned before use.

Some Good habits regarding conservation of water

We can conserve water in our daily life through following methods :

1. Use only required amount of water for every purpose (bathing, brushing, washing clothes / utensils)
2. Use water with mug / bucket instead of pipes / shower.
3. The tanks for water storage should be covered.
4. Waste water from R.O. should be put in flowerbeds or used for cleaning purposes.
5. After washing the vegetables used water should be put into potted plants .

6. Immediately turn off the water tap if found running without use.
7. Use Autocut Switch in houses to stop overflow from the water tanks.



Things to Remember

- It is necessary to conserve water.
- Misuse of water should be stopped.
- Water pollution should also be checked.
- The water comes to our homes from the water works.
- We should use rain water harvesting method for saving rain water.
- People living in different regions store water by different methods .
- Some good habits should be adopted in daily life for the conservation of water.



Q.4. Fill in the blanks :

(shower, flower beds, potted plants, submersible, earthen pitcher)

1. Villagers use for storage of water.
2. Bucket / mug should be used instead of for bathing.
3. After washing vegetables we can put used water into.....
4. People have installed pumps in their houses.
5. Waste water from RO can be put into

Q.5. Tick (✓) the correct and cross (x) the wrong sentences:

- a. It is necessary to conserve water. ☐
- b. After washing vegetables, the used water should be thrown away. ☐
- c. Unused running tap should immediately be closed. ☐
- d. R.O. system saves the water. ☐
- e. We should keep the tap running while brushing. ☐

Q.6. Tick the (✓) right answer :

- 1. What is used to store water in villages ?
Pitcher ☐ Tank ☐ Drum ☐
- 2. From where is the water pumped out by submersible pump ?
Underground ☐ From canals ☐ from ponds ☐
- 3. Who checks drinking water in schools ?
Education Department ☐
Water and Sanitation Department ☐
Health department ☐
- 4. What should be used to stop overflow of tanks ?
Submersible pump ☐
Auto cut switch ☐
R.O. System ☐
- 5. What type of water is conserved by Rainwater Harvesting ?
Rain water ☐ Pond water ☐ Canal water ☐

Q.7. Answer the following questions in brief :

- b. From where does the water come in our houses ?
.....
.....

- b. What is added to water to kill microorganisms in water ?
.....
.....
- c. Which method should be applied to store rain water ?
.....
.....
- e. Write two good habits for water conservation.
.....
.....

LESSON-19



CHHUCK-CHHUCK RAIL

Everybody in the school was happy today. The Headmaster announced in the morning assembly that school had participated in a competition called 'Green School Programme' and our school will be awarded for the good work. To get this award two student-members and a teacher of the Eco-Club will go to Delhi. On hearing this, everybody became happy.

Government has established 'Cleanliness Club' in schools for creating awareness among students regarding cleanliness of schools and surroundings. Under this, so many activities are performed to connect students with their environment.

Q.1. Why is it necessary to save the Environment ?

.....

.....

Q.2. Which activities are being performed in your school by the cleanliness club ?

.....

.....

Activity 1:

Make a list of Cleanliness Club/Eco Club members of your school.

Name of Club Member	Designation/ Class	Name of Club Member	Designation/ Class

Activity 2:

Children, you must have gone to Bus stand. What is the difference between A Bus Stand and A Railway Station ? Prepare a list of things which are different at Bus Stand and at Railway Station.

Things seen at Bus Stand	Things seen at Railway Station

Next day, a teacher and students reached the railway station to go to Delhi.

The teacher checked for their names in the reservation chart. On seeing a train at the station, Deepak said, “Sir, let us go, otherwise we will miss the train.” The teacher said, “No, as our school has a time-table, similarly, railway department also follows a time-table. The arrival and departure of each train is fixed. The train which we are to board will arrive after half an hour. Look at the time table.”

Train No	Train name	Start date	Train type	Source	Destination	Rescheduled by	Rescheduled time
11449	JBP-JAT EXPRESS	22 Dec 06:30	MAIL EXP	JBP	SVDK	1:30 hrs	08:00
12029	SWARNA SHATABDI EXPRESS	22 Dec 07:20	SHATABDI	NDLS	ASR	1:40 hrs	09:00
12054	ASR-HW JAN SHATABDI EXP	22 Dec 06:55	JANSHATABDI	ASR	HW	3:20 hrs	10:15
12468	ANVT-JBNSUPERFAST EXPRES	22 Dec 07:30	SUPERFAST	ANVT	JBN	45 min	08:15
12497	SHANE PUNJAB EXPRESS	22 Dec 06:40	SUPERFAST	NDLS	ASR	3:50 hrs	10:30
12523	NJP-NDLS BI-WEEKLY EXP.	22 Dec 08:15	SUPERFAST	NJP	NDLS	1 hr	09:15
12716	ASR-NED SACHKHAND EXP	22 Dec 05:35	SUPERFAST	ASR	NED	1 hr	06:35
12842	COROMANDEL EXP	22 Dec 08:45	SUPERFAST	MAS	HWH	7:45 hrs	16:30
12862	KZJ-VSKP LINK EXPRESS	22 Dec 02:30	SUPERFAST	KZJ	VSKP	2 hrs	04:30
12888	BBS-PDY S/F EXP	22 Dec 12:00	SUPERFAST	BBS	PDY	2:30 hrs	14:30
14625	DEE-FZR INTERCITY EXPRESS	22 Dec 06:45	MAIL EXP	DEE	FZR	5:15 hrs	12:00
14649	SARYUYAMUNA EXP	22 Dec 07:15	MAIL EXP	JYG	ASR	1:15 hrs	08:30
14674	SHAHEED EXP	22 Dec 11:55	MAIL EXP	ASR	JYG	3:05 hrs	15:00
14707	RANAKPUR EXPRES	22 Dec 09:30	MAIL EXP	BKN	BDTS	2:40 hrs	12:10
15209	SHC-ASR JANSEWA EXP	22 Dec 08:45	MAIL EXP	SHC	ASR	2:25 hrs	11:10
15210	ASR-SHC JANSEWA EXP	22 Dec 06:35	MAIL EXP	ASR	SHC	3:25 hrs	10:00
15708	ASR-KIR EXPRESS	22 Dec 07:15	MAIL EXP	ASR	KIR	5:15 hrs	12:30

Sample of Railway Time-Table

There was a great rush at the station. After some time, the train arrived. Everybody picked up his luggage. As soon as the train stopped, they boarded it. Teacher took out the ticket and checked the seat numbers. Pritpal got the top most berth, Deepak got the middle one and the teacher got the lower berth. They put their bags under the lower berth. Deepak was wondering, how all three of them would travel on a single ticket. Teacher smiled at him, and satisfied him showing the ticket.

For the Teacher : Arrange a rail ticket and help the students to fill up the following information :

1. Age _____
2. Fare _____
3. Date of Travel _____
4. No. of Passengers _____
5. Seat No. _____

*Earlier, ticket booking could be done only on Reservation Counters established by Indian Railways, but now tickets can be booked online from home. Fare can also be paid by e-payment.

They sat near the window and the train started. ‘Suddenly Pritpal remembered the instructions of his teacher about diary writing. He took out his diary and started writing. ‘Electric poles, trees and buildings are appearing to be running backwards. It is difficult to look at these things for long time.’

‘Deepak was interested in watching the crops and trees, which could be seen up to a quite long distance. It fascinated him’.

‘Yes, everyone likes greenery’.

Think, If there are no trees on this earth, how will it look ?

“Why the train has stopped ? Who is speaking so loudly outside ? OK, it is a station. There was written ‘Bathinda Junction’ just in front of us, in capital letters. I have heard about Bathinda city but what does the word junction mean ? Yes, the teacher might be knowing about it.”

For teacher : Tell the students about Railway Junction.

‘The teacher is reading a book. The sound of train is quite charming but when it was crossing over a river-bridge, the sound totally changed. It was a bit horrifying. Yes, I observed another thing, when the train was

crossing over the bridge, some people were throwing coins into the river’.

‘It appeared from the noise that the train is approaching the station. Many passengers have started collecting their luggage. Unlike in bus, in train nobody alerts about the station. The passengers have to be careful themselves. The teacher is saying that the train is about to reach. We should also collect our bags. So, I’ll write rest of it later in my diary.’

‘Railway station of Delhi was very big as compared to the one in our city. There were many people. It was hard to count number of people getting in and out of the train. Once again our tickets were checked at the gate by the ticket checker. We came out of the station with great difficulty. Now we were to reach the hostel. We hired an autorickshaw and reached the hostel. Autorickshaw puller charged the fare according to meter reading.’

‘From there, we walked to Metro Railway Station near New Delhi Railway Station.’

‘Delhi Metro is a cheap and easy means of transport for people living in the Capital and its neighbouring areas. Metro Station is fully air-conditioned. There is a good arrangement of security and cleanliness.’

‘We purchased ticket from ticket-counter. All of us got a token in the form of ticket on showing which the automatic machine led to the opening of gate to move towards platform. We reached our destination travelling by metro train. From there, we reached hostel by Metro Feeder Bus.’



Metro Train

'I feel good on reaching hostel. There are many students who have come from far away places to participate in this programme. Abdul has come from Shimla and Alice from Goa. We all were friends now. At first, it was very difficult to converse with each other. But now we are able to understand each other easily. I read out my diary and all liked it'.

How did you like the travelling experience noted by Pritpal in his diary? Now if you go somewhere during the holidays, you must write your diary.

After listening to the diary, Abdul said, "We have also come here by train but there were many tunnels on the way from Shimla to Kalka. Some of them were very long and whenever the train passed through them, it became all dark for a while. Thank God, the lights in the train were on. We saw from the window that there were big mountains on one side and deep gorges on the other. The train, we boarded is called Himalayan Queen but my father call it Toy-Train. Let me show you its picture."



Toy Train

Prestigious Institute UNESCO, which protects World Heritage, has given the status of World Heritage to the 'Himalayan Queen' on 10th July, 2008. Shimla-Kalka train service was opened to general public on 9th Nov. 1903. This 9657 km rail track consisting 103 tunnels (now 102) and 800 bridges was constructed in only three years. A local resident named Baba Balkhu had presented his world level Engineering skills before public to complete this work.

Looking at the picture, Alice said, “Its compartments are very small ! just like toys. Seeing this picture, I remember my travel by ferry. Let me read out a few pages of my diary.” Alice said, ‘When we go to see my maternal uncle (Mamaji) we go by a boat called ferry. Many people can sit in it. To reach the railway station, we at first have to take a ferry and then an autorickshaw. It takes a lot of time from Panaji to Delhi. We had reached Delhi from Panaji via Mumbai, Gandhi Nagar and Jaipur. Our teacher told us that the route of our train had been changed due to some repair works which had been going on the actual route. This new route was longer’.

Children!, You know that in countries like Japan, high speed trains run. They are called Bullet Trains. These trains run at a speed of 500 km/ hour. In India, Indian Railway has also planned high speed bullet train from Mumbai to Ahemadabad. Its work is under progress. After completion of the project in 2023, this train will cover the distance of 508 km in two hours and seven minutes.

‘Rajasthan is entirely different from Goa. Goa is on the bank of sea. We see water all around. In Rajasthan, it is sand everywhere. As if it were a ‘Sea of Sand’. Some people were seen riding over the camels. I read in my book that camel is the best animal to travel in a desert. It’s flat and padded feet help it walk over the sand. Water is not easily available there. Camel can live



without food and water for many days. At Jaipur Railway Station, the voices of 'Dal Bati Choorma', were heard. I came to know later that it was the traditional food of Rajasthan. A little girl was singing sweetly, 'Padharo Mhare Des...'. An old man accompanying her, was playing an instrument called 'Sarangi'. It appeared to me that she would be of my age. I wanted to ask about her class. I guessed that she was not a school going girl. Her sweet voice appeared to me like a lullaby, that's why I felt sleepy. We all were asleep. Finally we reached Delhi."



Things to Remember

- Cleanliness Clubs are established in schools for creating awareness regarding cleanliness of schools and neighbourhood.
- Every train has a fix schedule of departure and arrival which is called Time-Table.
- Ticket can be booked online from home also.
- Metro Rail has been developed for Delhi and its neighbouring cities.
- The train running between Kalka and Shimla is called 'Himalayan Queen.'
- In countries like Japan, high speed trains run which are called Bullet Trains. These trains have a speed of 500 km/hour.



Q.3. Fill in the Blanks :

(Himalayan queen, Cleanliness clubs, online)

- (a) Now in the era of Information & Technology, booking of tickets can be done from home.
- (b) have been established in schools for creating awareness regarding cleanliness of schools and neighbourhood.
- (c) is the name of train running between Kalka and Shimla.

Q.4. Which animal is suitable animal for desert ? What are the main features of this animal ?

.....
.....

Q.5. What is meant by ferry ?

.....
.....

Q.6. What are the specialities of bullet train ?

.....
.....



Scene of A Railway Crossing

Q.7. Some people keep on crossing the railway gate while it is closed for the train. Is it right to do so ?

.....
.....

LESSON-20



KNOW YOUR CURRENCY

Preeti has collected some coins and currency notes and now she is arranging them in a sequence. Then she will arrange these coin in an album. Many of these notes and coins are given to her by her cousin, Mandeep. Let us see, how she has arranged these notes in her album.



Look at the notes carefully, which out of these are part of Indian currency. Try to find out which notes are of which country.

Mandeep feels that it will be better for Preeti to arrange Indian currency and foreign currency separately.

Can you help Preeti in identifying Indian and foreign currency ? You can read the name of country over currency notes.

Mandeep told Preeti a few special things about Indian currency notes so that she might be able to solve this task of recognition.



“This is a two thousand rupees note. Bhartiya Reserve Bank in Hindi and Reserve Bank of India in English is written on it. The colour of this note is dark pink. There is a picture of Mahatma Gandhi in front and Mangalyaan on backside. It also bears Swatchh Bharat Logo on it. Two thousand Rupees is written in many languages over it,” Mandeep told Preeti.

Mandeep said, “Let’s find how many languages are written on a ten rupee note ?,” Preeti showed her ignorance by making faces.



Ok, I tell you, besides Hindi and English, value of ten rupee note is written in other languages. So, 17 languages are written on a ten rupee note. How many languages can you read out of these?

A picture of five hundred rupee note is given below.

Observe and answer the following questions.



Q.1. How many languages are written on a five hundred rupee note ?

.....

Q.2. Picture of which historic monument is printed on a five hundred rupee note ?

.....

“Preeti, do you know that like notes, coins are also a part of currency. There is great importance of coins in our daily life. These are also known as Mini Currency,” asked Mandeep.



Q.3. Out of the above coins, how many coins can you identify ?

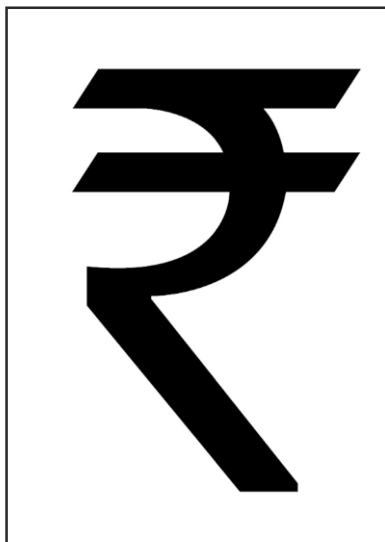
.....

Q.4. What is marked on these coins besides their price ?

.....

Can you see three lions on a five rupee coin ? This is the National Emblem of India. It is called called “Trimurti”.

Now, a special symbol has been designated to the Indian currency. This symbol is marked on the new notes and coins.



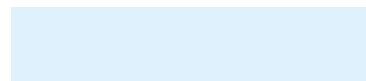
Symbol of Indian currency

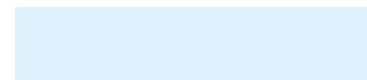
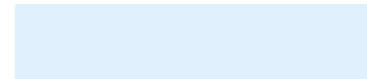
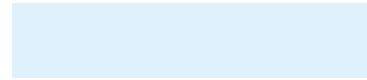
Like Preeti, many people have the hobby of coin collection. It is called **Numismatics**. We should keep our currency neat & clean. We should not write any thing on the notes.

Sometimes, keeping in mind the Monetary Policy of country, the currency in use is changed to a new currency. This is called Demonitization. Demonitization was implemented in India on Nov. 8, 2016.

Look at the currency notes given below :

Write down their value in the boxes given in front of them.





Q.5. How will you get to know the country, whose currency is shown in the pictures ?

.....

.....

Q.6. Whose picture do you see on Indian notes ?

.....

.....

Q.7. Can you see any other number besides price on these notes ?

.....

.....

Q.8. Can two notes have identical numbers ?

.....

.....

Q.9. Write down the name of bank written on Indian Currency Note.

.....

.....

LESSON-21



HOUSES AND BRIDGES

Raju was going to Agra to visit Taj Mahal with his grandfather. He started his journey from Amritsar and moved via Delhi. He sat by the window in the compartment of train. Train started making loud noise. Raju was feeling very happy by seeing different sights. He was feeling very surprised to see small villages, big cities, buildings, canals, streams and long bridges.



Big Building



Masons making the building

Suddenly, he saw a huge glass building. He asked Grandfather, “Has this building been built by a single person ?”

Grandfather told him that many skilled worker work together to construct such a big building. These skilled workers are called Craftsmen.

Raju – Dada ji, tell me about every craftsman who helps to construct the building.

Grandfather – My son, listen, I will tell you about all craftsmen who construct the house.

1. **Architect** : This craftsman is an engineer. He draws the map of a building on a paper. Now-a-days this work is done with the help of computer. Architect guides the other craftsman till the completion of

house.

2. **Mason** : A mason constructs buildings using bricks. He does plastering and flooring using of stones, cement and tiles. He uses tools like brick travel, hammer, plumbline and cutter.
3. **Labourer** : These persons play an important role in the construction. They help all type of professionals. They hand over the tools, machines, cement, gravel, sand, etc., to them.
4. **Electrician** : He fits the electric wires in the house so that fans, airconditions, bulbs, refrigerators, television, etc., can work. He uses tools like tester pin, plier, screwdriver and drilling machine.
5. **Plumber** : He fits pipes lines for sewage and water taps in the building.
6. **Carpenter** : He makes wooden doors, glass & net windows, cupboard, bed and sofas. Now-a-days, aluminium and plastic is used instead of wood. He uses tools like saw, hammer, router plane and measuring tape.
7. **Painter** : He makes the building beautiful by painting it from inside and outside. They paint with the help of brush and roller.

Activity 1:

Write the names of different types of Professionals after seeing the picture.



Raju

- Dada Ji, it means different types of material are used to construct a building.

Grandfather

- Yes, bricks, soil, mud, cement, sand, gravel, iron, steel, stone and wood are used on large scale to build a house.



Bricks

Raju

- Dada Ji, How are the bricks made ?

Grandfather

- Son, bricks are needed the most to construct houses. In old times, kutcha houses were made with the help of unbaked bricks. Now, pucca houses are made with baked bricks. First of all, dough is made by mixing water with clay. Then bricks are made by putting this soft soil in a frame. After drying in sun, bricks are baked at a very high temperature, in a kiln.



The water present in bricks, evaporates after heating. The soil particles stick to each other and become hard. Thus, bricks are baked in kilns. Coal is used for baking the bricks. Due to this, poisonous gases are released with smoke, which results in air pollution. So the trees are planted around the kilns. It minimises the air pollution. Now-a-days, cement bricks are used instead of bricks baked in Kilns.

Activity 2:

Motivate the students to prepare bricks from soil with the help of an empty matchbox.



1. Take an empty match stick box



2. cutout the base from the box carefully to make mould



3. Prepare wet clay similar to dough



4. Fill the wet clay dough in the mould.



5. Take it out from mould and let it dry in sun



6. Prepare toy building with these bricks.

Cement : It is a fine powder made from gypsum. It makes the building strong. It is applied on bricks after mixing sand and water into it. A mixture of cement, gravel and water is called **Concrete**. It hardens after some time. It is used for making floor, pillars and roof tops. Iron rods are used in cemented beams or pillars.

Q.1. Make a list of things used to make Pucca house.

.....

Q.2. What does a mason do ?

.....

Q.3. How can the air pollution caused by smoke of kilns be lessened ?

.....

Q.4. Tick the (✓) right answer :

a. Which tool is used by a mason to check the verticality of the wall?

Hammer

☐

Plumbline

☐

Measuring Tape

☐

Brick Travel

☐

b. What happens to mixture of cement, gravel, sand and water when kept for some time ?

Weakens

☐

Softens

☐

Hardens

☐

Brittle

☐

c. Which apparatus is used by a electrician for testing the current ?

Plier

☐

Tester pin

☐

Screw driver

☐

Bulb

☐

d. From what material the bricks are made up ?

Wet clay

☐

Sand

☐

Straw

☐

Dust

☐

Bridges

The superfast train slowed down suddenly while crossing a river bridge, Raju was surprised to see such a big and long bridge made up of iron frame.

Raju – Dada ji, “Why are bridges made ?”

Grandfather – The bridges are made to connect two edges of rivers, lakes, ponds or canals for transportation. Have you ever seen a bridge ?

Raju – Yes, Dada ji, I have seen a bridge built on the canal situated in the way from home to school. Why are different types of bridges built in our country ?

Grandfather – My son, the land of our country is not plain. Some where the land is hilly and somewhere there are rivers. So different kinds of bridges are required to carry on the transportation.

A person sitting next to them described in detail about different types of bridges and showed them pictures also with the help of search tool in his mobile phone.

Bamboo Bridge :

These type of bridges are made by general public in hilly areas. These are helpful in crossing small drains and hills. These are made with the help of bamboo and strings (ropes) tied to the trees from the corners. These are made for walking purpose only. This type of bridges are found in Asam.



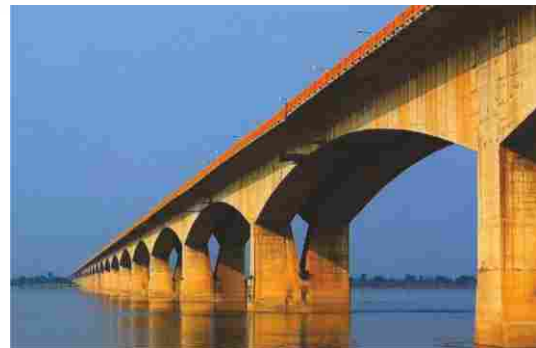
Clapper Bridge :

For making this type of bridge, some stones are kept like beams and some like pillars on other stones so that water keeps flowing easily and so does the transportation. This type of old bridges are found in England.



Concrete Arch Bridge :

This type of bridges are made up of cement, lime and bricks. They are built like an arch of a house roof. These are the oldest bridges. Mahatma Gandhi Setu is an arch bridge situated in Patna, the Capital of Bihar.



Suspension Bridge :

These bridges are made with the help of thick steel wires. Strong poles are erected on both sides of bridge to support these wires. These poles bear the weight of whole bridge. This type of bridge is constructed, in Allahabad (Uttar Pardesh), on the river Yamuna.



Movable Bridge :

This type of bridges can move upwards and downwards. They can be in two parts. These parts are pulled upward for the passing of ships and boats. Then they are pulled down after passing of the ship and so the transportation. Pamban bridge of Rameshwaram city, in Tamilnadu, is this type of bridge.



Pantoon Bridge :

This type of bridges are made by joining many empty drums. Light transportation is started after keeping wooden planks on drums. These are made by Army (military), for public during floods.



Cantilever bridge :

This bridge is made by joining iron cantilevers which are supported on sides only. Railway bridges are made like this. Hawrah bridge is also a cantilever bridge.



Tunnel :

In hilly areas, tunnel is made by cutting across the mountains for transportation. The Jawahar Tunnel made in Jammu Kashmir is 2850 m. long.



Raju felt happy. Grandfather thanked the gentleman for this information.

Raju - Uncle, small bridge made on the drain of our home also works like a bridge. I will share the knowledge given by you with my friends and parents.

- Raju** – Dada ji, There is a big bridge built on a road near our house, but water flows there ?
- Grandfather** – My son, underbridges, overbridges or flyovers are made in big cities to control vehicular traffic or to minimise the traffic.



Under bridge



Fly over bridge



Things to Remember

- Bricks, cement, iron and sand are needed to build a house.
- Many masons and labourers build buildings and bridges by working hard day & night.
- Bricks are baked in brick-kiln.
- The smoke coming out of brick-kilns pollutes the air.
- Bridges are made for movement of vehicles.

Q.1. Match the Columns :

(A)

Mason

Carpenter

Painter

Architect

Electrician

Plumber

(B)



Activity 3 :

Build an over bridge to pass over the flower beds in your home or school. Make a list of items required to build it.

Q.6. Witch bridges have you seen ? Write the name of places where you have seen the bridges.

.....

.....

Q.7. What is the need to construct fly overs ?

.....

.....

Always Remember



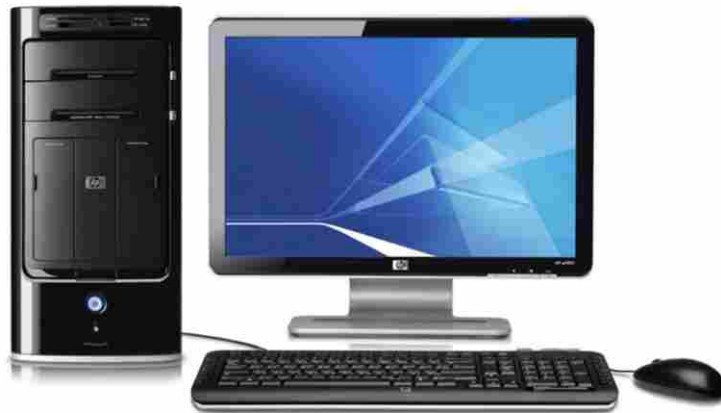
The population of our country is increasing continuously. The houses are built on large scale due to increasing population. The fertile, land under agriculture and forests, is decreasing. We should not misuse the natural resources.



COMPUTER : A UNIQUE MACHINE

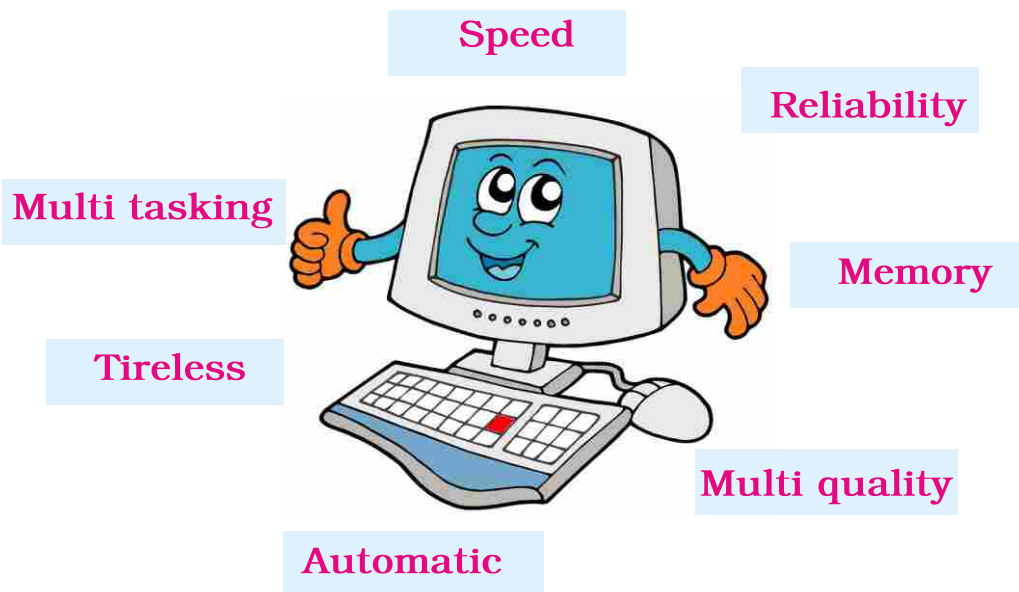
Computer :

Computer has made our day-to-day tasks very easy, and it also helps us performing almost every task in much quicker way.



Computer : A unique machine :

Yes, It is true that computer is just only a machine, but it is very unique in itself as compared to other machines. Following features has made it very unique.



1. Speed :

Computer is a speedy device. It saves our time. Computer can solve a problem in microseconds, which a man solves in hours.

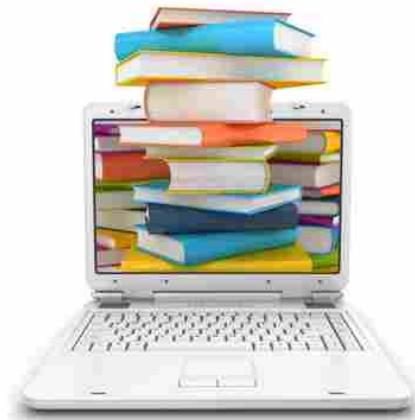
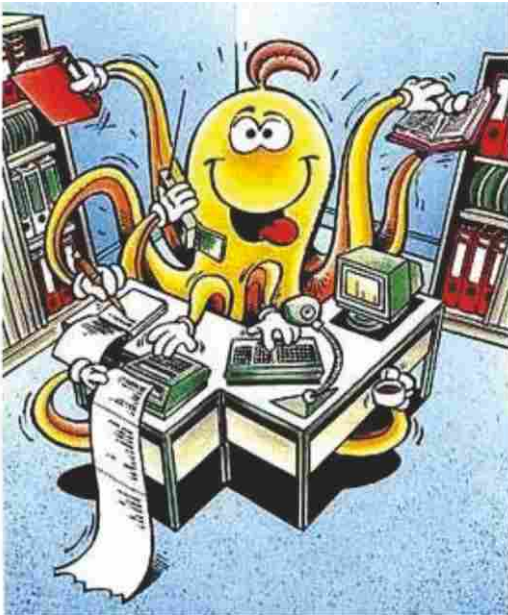


2. Reliable :

Computer is very much reliable. It never gives wrong results, if provided with right instructions.

3. Memory :

Computer has a very sharp memory. It stores, retrieves and processes a large amount of data.



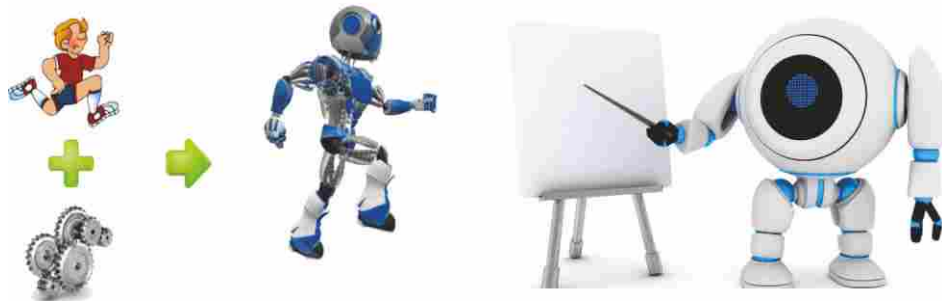
4. Multi-Tasking and Multi-Quality:

One computer has been able to perform various functions. List of functions performed by computer is increasing day by day. It can perform multi tasks at one point of time.

For teacher : Multitasking means to be able to perform many tasks at once and multi quality means able to perform different tasks at one time . Help the students understand the difference between multi tasking and multiquality.

5. Automatic :

Computer is also an automatic machine. On providing instructions, it can work by its own, or we can say that it works like a robot which works without the help of human beings.



6. Tireless Machine :

Computer is able to perform functions continuously without getting tired.



Q.1. Fill in the blanks :

(unique, forget, fast)

- Computer is a machine.
- Computer does not stored information.
- Speed of computer is very

Q.2. Tick (✓) the right and cross (×) the wrong statement :

- a. Computer works very slowly. ☐
- b. Computer performs one task at one time. ☐
- c. Computer is a tireless machine. ☐
- d. Computer can store vast amount of information. ☐
- e. We cannot trust computers. ☐

Q.3. What is a Computer ?

.....
.....

Q.4. List the advantages of computers.

.....
.....

What can we do with Computer ?

Dear students, in last part of chapter we have learnt, why computers are different from other machines. This fabulous machine can also become your friend, if used properly. We can use computer for various purposes while sitting at home or school.



1. **For playing games :**

You can play your favourite games on computer. You can also install new games of your choice in computers.



2. **For painting and drawing :**

You can use computer for drawing. In this way you can express your creative skills, and there is no expenditure on paper, colours, etc.



3. For Typing :

You can type on computer. You can write letters, documents, etc.' to send them to anyone within seconds.



4. For Calculations :

You can do calculations of Mathematics very easily with the help of computers. There is no risk of any error.



5. To Listen Songs :

If you are getting bored of reading or work, you can listen to your favourite songs on computer. All types of music are available on Internet.



6. To Watch Movies :

On computer, you can watch not only movies, but also enjoy the songs.
Now a days you can watch T.V. Programmes on computer.



7. For Searching :

With the use of computers you can search interesting information related to your field.



Q.5. Fill in the blanks :

(friends, search, drawing)

- a. Computer can become your best
- b. There is no need of paper for on computer.
- c. Students can their favourite information.

Q.6. Tick (✓) the right and cross (x) the wrong statement:

- a. We can play games on computers. ☐
- b. We cannot watch movies on computers. ☐
- c. We cannot do calculations on computer. ☐
- d. Computer can be used for typing. ☐

Q.7. List the functions you can perform with the help of computer.

.....
.....

Q.8. Fill your favourite colours in the pictures.

