



202en20

20

NEW GOOD THINGS FROM RUBBISH

‘We do not own the Earth, we hold it in trust for the future generations.’ With increasing population and consumption, and changing **life style** and technology, the needs of people are also increasing. We need more paper for books, notebooks and newspapers, more metal for making vehicles, more plastic for day to day life and so on. If we make new materials every time we need new things, it will result in a gradual **decline** of our natural resources. Waste materials will keep collecting and our beautiful earth will start to look like a garbage bin. Hence it is important to control our wasteful habits. We must understand that old metal or plastic utensils, old books, newspapers, and other waste can either be reused or recycled. But is it possible to recycle all our rubbish in an equally profitable way? Or should we recycle a few of the waste materials and leave the rest? Let’s read to find out more about recycling.



OBJECTIVES

After completing this lesson you will be able to:

- develop self awareness about your actions in relation to the wastage/conservation of Earth’s resources;
- suggest different methods of recycling in everyday life;
- recognize the importance of preventing the wastage of Earth’s resources;
- express your views on saving resources;
- justify the need for recycling;
- identify words associated with natural resources;
- develop a dialogue;
- identify and use conjunctions, and
- describe a process using the passive voice.

life style -way of living that reflects our attitudes and values
 decline – gradual reduction
 bin - a container for putting rubbish
 recycle -transform old or waste material into new, useful things
 reuse - use the same object over and over without changing its form



20.1 LET US READ THE TEXT

Recycling rubbish not only helps save money-it also helps the environment. We **lessen** the pollution that is created by burning rubbish and we save valuable **resources**. Western countries waste a great deal of the earth's resources. For example, in the USA about 75,000 trees are **felled** every week just for printing the Sunday edition of the New York Times. Recycling used paper would easily save these trees.

Many countries encourage recycling and new technology allows more waste to be reused. Most of the world's rubbish can be reused-paper, metals, glass, and even some plastics.

Plastic is one of the most difficult substances to recycle, because it comes in so many varieties. Some plastic bottles, for example, consist of six layers of different types of plastic, each designed to give the bottles certain qualities - shape, strength, flexibility. And as yet there is no simple way to turn an old plastic bottle into a new one.

Plastic scrap can only be turned into a product of lower quality - a plastic might be cleaned, cut into very very tiny pieces and used to stuff seat cushions, a mixture of plastic waste can be recycled into plastic 'timber' and used to make durable fencing. But a lot of plastic waste still has to be thrown away.

Metals are different. Any car on the road today will consist, in part, of earlier cars that have been scrapped and recycled into new steel and other metals.

The more valuable the metal, like gold and silver, the more it pays to recycle it. Aluminum is worth recycling because **extracting** it from Bauxite consumes a huge amount of electricity. Since most Aluminum today is recycled, the energy used to make Aluminum has fallen by a quarter since the early 1970's.

Glass is also worth recovering. The most sensible method is to use glass bottles as often as possible. In countries which still use milk bottles, the average bottle makes about 30 trips to and from the dairy.

Broken glass known as 'cullet' can also be recycled, and many western countries have bottle banks into which used bottles can be thrown. Usually there are payments. Bottle banks depend on people's goodwill. The success of bottle banks varies widely from country to country. The **Swiss** and **Dutch** recover 50 percent of their glass, while in Britain only 12 percent is recovered. In India of course, we sell our bottles which are then reused.

Glass is best separated by colour, since cullet of mixed colours can be used only to make green glass. Broken glass can be remelted in furnaces and then it can easily be shaped into new bottles or other objects.



Notes

lessen – reduce

felled – cut down

resources-materials required to produce things we need

extracting- taking out

Swiss - the people of Switzerland

Dutch – the people of the Netherlands/Holland



Notes

Half the world’s waste consists of paper. Many countries import waste paper rather than new **pulp** for their paper mills. The waste is pulped, cleaned and bleached to remove most of the ink and dirt, before it is turned into new paper in the same way as wood pulp or rags, Japan now makes half its paper by recycling.

It is true that in India we generally avoid waste. However, as we enter the twenty-first century, we are beginning to **imitate** some of the wasteful habits of the western countries. This is something that all of us need to think about.

20.2 LET US UNDERSTAND THE TEXT

20.2.1 PART 1

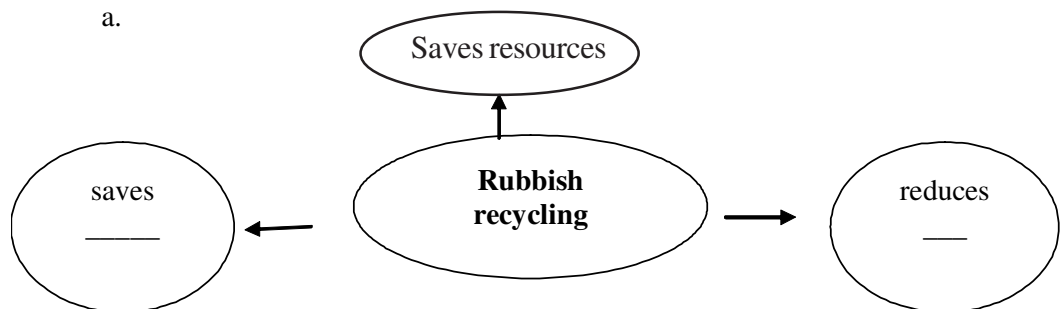
Recycling rubbisheven some plastics.

Reusing rubbish is one of the important ways of reducing pollution. Rubbish which is not reused is disposed of by burning. This leads to pollution. The cutting down of thousands of trees for the purpose of printing newspapers leads to a waste of the earth’s resources. Instead, if we reuse the most commonly used paper, metal, glass and plastic objects, it will help us save natural resources and our environment.



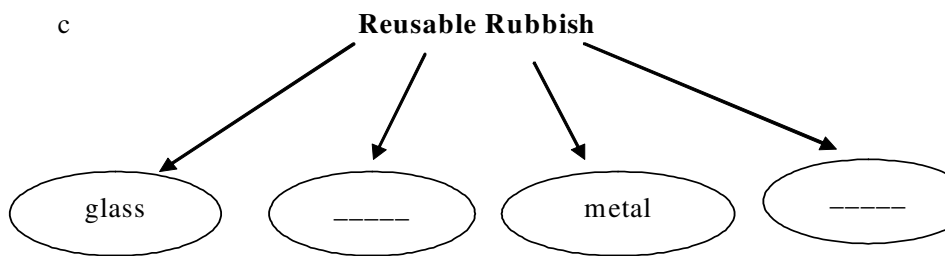
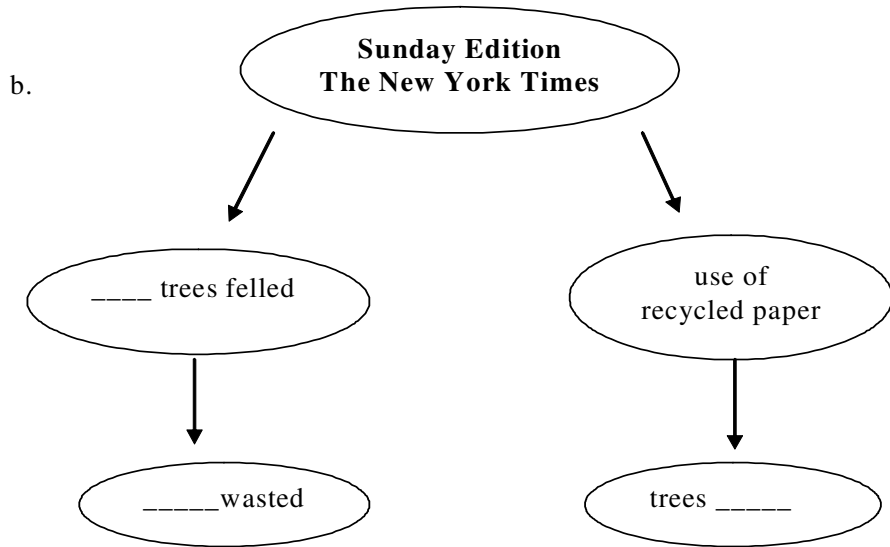
INTEXT QUESTIONS 20.1

- I. State which of the following statements are false and why.
 - a. Recycling is the need of the hour.
 - b. We should burn our rubbish.
 - c. Recycling means reusing waste material.
 - d. Thousands of trees are felled to print the Sunday edition of the New York Times.
- II. How is the reusing of waste beneficial? Explain.
- III. Summarise the passage by completing the following web:



pulp- soft, thick, shapeless mass

imitate- copy action (s)



? DO YOU KNOW

RECYCLING SAVES

energy

equal to energy
generated by eight
nuclear power plants

material

equal to the weight
of a 1650 mile long fully
loaded train



LET US DO 20.1

When a gift is presented on a birthday, at a wedding, or on a festival, it is wrapped in a beautiful paper. This paper is thrown away later.



Fig. 20.1

Task 1. Think about and write down three more ways in which paper is often wasted.

Task 2. What can we do to put a check on such wastage? Suggest any two ways.

20.2.2 PART 2

Plastic is one.....since the early 1970's.

It is not easy to recycle plastic. It is also not possible to make good quality plastic products out of recycled plastic. But it does not mean that plastic is a complete waste after it has been used once. Some of the plastic we use can be reused for filling cushions or recycled for making fences. Metal products can be reused in many ways. Metal recycling not only saves natural resources, but also a lot of electricity and energy.



LET US DO 20.2

Try to find out about the Chipko Movement.

- Who started it?
- Where was the movement started?
- Why was it started?
- How did people participate in the movement?
- What was the outcome of the movement?



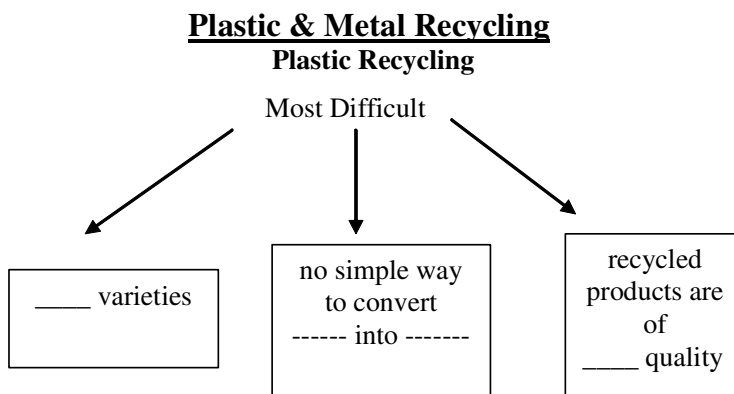
INTEXT QUESTIONS 20.2

- I. State which of the following statements are false and why.
 - a. It is simple to recycle plastic.
 - b. We should avoid recycling Aluminum.
 - c. A new shining car has components of old cars.
 - d. It is always beneficial to recycle valuable metals.
- II. How is metal recycling different from plastic recycling? Explain.
- III. In the first line of the last para, the word **more** is used twice.
 Make a sentence using **more** in a similar way.
 Eg. The **more** respect you give the **more** you get.
- IV. Circle the objects which can be recycled from the given graphics:



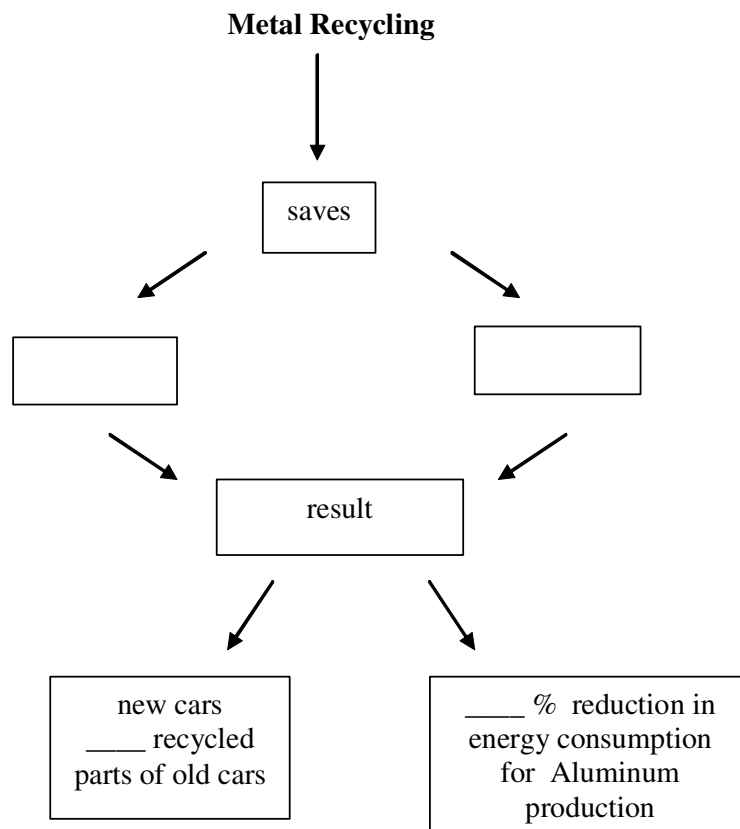
Fig. 20.2

- V. Summarise the paragraphs in Part 2 by completing the following web:



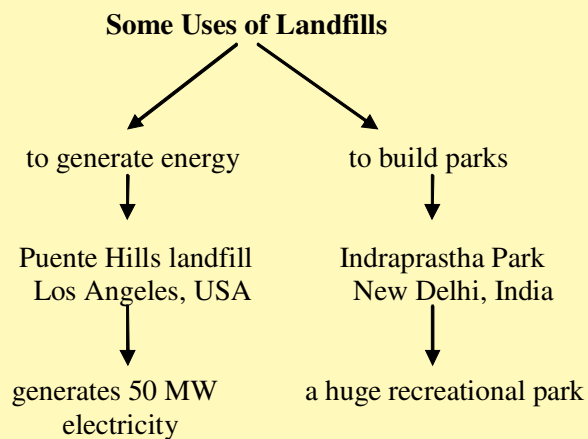


Notes



? DO YOU KNOW

Landfills are large areas used for waste disposal. Waste collected from a city is dumped inside the landfill. This waste slowly decomposes. Later these landfills can be used for various purposes.





LET US DO 20.3

After reading the lesson so far, you feel deeply about the important issue of preserving nature and its resources. You want to raise awareness and concern for it.

Write a letter to your cousin suggesting various ways that may help him/her to become eco-friendly in day to day life.

A few ways are suggested below:

reuse plastic/glass bottles, use handkerchiefs instead of paper tissues, reuse gift papers, and so on. Suggest 4-5 more ways in your letter to your cousin.

Given below is a format for an informal letter.

Sender's Address

Date

Dear _____ ,

Body of the letter

Your loving friend,

Note: Section LET US WRITE in the lesson “A Birthday Letter” also contains the format for an informal letter

20.2.3 PART 3

Glass is best..... all of us need to think about.

The best way to save glass is to reuse glass bottles and other glass objects to the maximum. Glass can also be recycled to form new glass objects. Recycling broken glass of mixed colours only produces green coloured glass. Therefore, the best way to recycle glass is to separate broken glass by colour, and then remelt it to produce new glass objects. Another important material that should be recycled is paper, as half of the world's waste is paper. In general in India we reuse a lot of things and avoid waste. But in the twenty first century we Indians copy some of the wasteful habits of people in western countries (such as using more and more disposable paper items for the sake of convenience). We should be aware of these changes in our habits and try to control them. All of us should try to check waste in any form.



INTEXT QUESTIONS 20.3

- I. State which of the following statements are false and why.
 - a. Glass bottles can be used over and over again.
 - b. Copying western habits may lead Indians towards wasting resources.
 - c. The British are more successful in recovering glass than the Dutch
 - d. Glass once broken is a waste material.
- II. Suggest two ways in which a student can avoid wastage of paper.
- III. In the sentence ‘Half the world’s **waste** consists of paper’, **waste** is used as a **noun**.
Make a sentence using **waste** as a **verb**.
e.g. If we **waste** time we can not get it back.
- IV Complete the following webs showing the processes of recycling various materials.

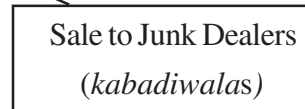
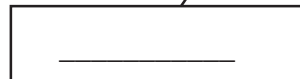
1. **Glass Recycling**

a. The most sensible way - Reuse

i. _____ used 30 times.

b.

Glass Recovery



British	Dutch	Swiss	_____
_____	_____	50%	

c.

Cullet Recycling

i.



new glass objects

ii.

different coloured glass





2. **Paper recycling involves**
- ↓
- a. pulping, _____, _____
- ↓
- b. removal of _____, _____
- ↓
- c. reusing _____



DO YOU KNOW



At left is the symbol that is stamped on recycled products. The three arrows put in clockwise movement reflect that a product or the material it is made of can be put to many uses again and again. Products bearing this logo/symbol are proud green environment products. The symbol indicates that the product stamped with this symbol can be used over and over, even though its form may change.



LET US DO 20.4

Prepare a box or dig a pit in a corner of your garden. Collect dry, fallen leaves or grass, and put these at the bottom of the box or pit. Throw leftover food, fruit and vegetable peels into it. Add more leaves or soil. Add a little water after every 6-7 days. Turn the contents in the box or pit every 12-15 days. In about five months this waste would get converted into manure.



Fig. 20.4

If you know of a Kisan Call Centre, call them and describe the colour/condition of the manure in your box/pit, and find out if it needs more time to convert into good quality manure. Or ask any gardener if the colour of your manure shows that it is ready to be used.

Try to find out about vermicomposting. Find out if vermicomposting will speed up the process of turning the contents of your box/pit into compost/manure.



LET US LEARN NEW WORDS 20.1

1. Underline the words which do not constitute our natural resources:
air, water, earth, plastic, trees, paper, gold, glass
2. Match the describing words with the nouns they describe:

Describing word	Noun
valuable	bottles
coloured	metals
western	glass
plastic	countries
precious	resources

Eg: plastic bottles



LET US TALK 20.1

- I. Ask two of your friends to read the following dialogue to you. The dialogue is a conversation between Binu, a TV reporter and Ms. Chhavi, an environmentalist. Assign the role of Binu to one friend and the role of Chhavi to the other. Listen carefully as they read it ...

Binu: Good morning viewers. Today we have with us Ms. Chhavi a well known environmentalist. She is going to tell us why she does not want trees to be felled.

Ms.Chhavi: Well, it is important to know why trees are felled. Most of the trees are cut down to make paper and furniture.

Binu: But these things are also necessary.

Ms Chhavi: Yes, but we do have alternatives. Furniture can also be made from steel or other material which can be easily recycled.

Binu: And what about books and notebooks and other paper products?

Ms Chhavi: First, people need to make judicious use of paper. Then the used paper should also not be wasted or thrown away. It should be recycled. Instead of paper bags we should use cloth bags. If we reduce our needs we can preserve our natural resources.

Binu: Thank you Madam. Have a nice day.

Ms. Chhavi: Thank you Binu. Have a Green Day.

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Notes

- II. As you heard in the above listening exercise, nowadays there is a lot of talk about green cities, green buildings, and green products. There is a campaign for a clean and green environment, and various suggestions are given to preserve nature and save our natural resources.

Now imagine that you are having a discussion with a friend about the ways of keeping the environment clean and green. Use the clues in **Box A** and **Box B** below to develop a dialogue about your discussion. An example is given to show you how to make up the dialogue using the two boxes. Use the question and answer pattern as shown in exercise no. 1 to develop your dialogue. Practise speaking the dialogue with your friend.

Box A

Do not waste paper
Use lead-free petrol
Do not use plastic-use paper
Use public transport instead of private transport.

Box B

The advantage (of)
One reason (for)
Another disadvantage (of)
The main problem (with)
The only result (of)

Example:

You : Do not waste paper
Your Friend : Why should we not throw away used paper?
You : One reason is it can always be recycled.



LET US DO 20.5

Visit a local *kabadiwala* and find out:

1. the various types of waste products he collects from households
2. what he does with each type of waste that he collects, such as newspapers, metal scrap, glass, plastic and so on.



20.3 LET US LEARN GRAMMAR

Linking Words

You would have noticed that certain words in the text of the lesson are used to connect words or sentences. These are called **linking words** or **connectors** or **conjunctions**.



Notes

Read the following sentences from the text, in which ‘**and**’ and ‘**because**’ are linking words:

Sentence 1

- Any car on the road today will consist, in part, of earlier cars that have been scrapped **and** recycled into new steel and other metals.

In the above sentence, ‘**and**’ joins the two words **scrapped** and **recycled**.

Sentence 2

- Plastic is one of the most difficult substances to recycle **because** it comes in so many varieties.

In the above sentence ‘**because**’ joins the following two sentences:

Plastic is one of the most difficult substances to recycle.

It comes in so many varieties.

Linking words or conjunctions are broadly divided into two categories.

Category 1 consists of conjunctions that join two words, phrases or independent clauses. These conjunctions are called **coordinating conjunctions**.

Coordinating conjunctions appear in the middle of a sentence, without a comma for the same subject, and with a comma for different subjects, as seen in the examples given below:

- She sang **and** danced.
- She sang, **and** he danced.

The conjunction ‘**and**’ in Sentence 1 is a **coordinating conjunction**. It has been used without a comma.

A few other **coordinating conjunctions** are but, yet, but still, even, as well as, either – or.

Category 2 consists of words that link two sentences or clauses of unequal rank. These conjunctions are called subordinating conjunctions. They appear in a sentence in two ways.

They appear at the beginning of a sentence with a comma, as in the following example....

- **Though** I was tired, I kept working.

OR

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They appear in the middle of a sentence with no comma, as in the example given below.

- I kept working **though** I was tired.

A few other **subordinating conjunctions** are when, where, though, because, since, if, until, till.

Now read the following sentences from the text.

- It is true that in India we generally avoid waste. **However**, as we enter the twenty-first century, we are beginning to imitate some of the wasteful habits of the western countries.
- A mixture of plastic waste can be recycled into plastic 'timber' and used to make durable fencing. **But** a lot of plastic waste still has to be thrown away.

In the above sentences '**however**' and '**but**' respectively, are the conjunctions used to introduce two contrasting ideas. '**But**' is generally used in informal contexts. Sometimes **but** can be replaced with **still** or **yet**. For example...

- The teacher was angry. **But** he did not punish the student.
 - The teacher was angry. **Still** he did not punish the student.
 - The teacher was angry. **Yet** he did not punish the student.
1. Fill in the blanks with appropriate conjunctions from the brackets.
 - a. Make hay _____ the sun shines. (when, while)
 - b. She must sleep _____ she will fall sick. (or, and)
 - c. You reap _____ you sow. (as, so)
 - d. The sky is neither cloudy _____ bright. (or, nor)
 - e. She is poor _____ happy (but, though)

2. Find out one example each of coordinating and subordinating conjunctions in UNIT III of the lesson.

3. The following passage has not been edited. The conjunction in each line is incorrect. Underline the error and write the correct conjunction in the blank space alongside

Turmeric has sacred so well as medicinal value (a) _____

It is native to India yet it is now grown (b) _____

in many countries in Asia or Africa. (c) _____

Researches establish while it can be used (d) _____

for colouring paints but varnishes . (e) _____

It is used that as a medicine (f) _____

Yet also as an inexpensive beauty aid. (g) _____



20.4 LET US WRITE

Describing a Process

“The waste is pulped, cleaned and bleached to remove most of the ink and dirt, before it is turned into new paper in the same way as wood pulp or rags.”

What is the above description about? It describes the process of manufacturing paper by using waste substances. The process involves four stages. All these stages in the process can be shown as follows:

The waste — pulped — cleaned — bleached — manufactured into paper.

When we describe a process we describe a series of steps that are taken to achieve the desired result. The achievement of the result completes the process. In describing a process we describe the order in which the steps are taken in the process.

- **What are the main features involved in describing a process?**

To make the stages in the process more explicit, we use **time markers** such as ‘first’, ‘second’ and ‘next. For example, we can say “**First**, the waste is pulped, **next** it is cleaned and **after that** it is bleached. **Finally**, it is turned into paper”.

The **passive voice** is often used to describe the steps or stages involved in a process. In the passive voice there is often no reference to the agent or doer. This is because the actions that make up the process are of the utmost importance in describing a process.

Here are some examples of sentences in the active voice which have been converted into the passive voice:

No.	Active	Passive
1.	The man hit the boy.	The boy was hit by the man.
2.	Reema is reading a story book.	A story book is being read by Reema.
3.	Mr. Verma has taken the class.	The class has been taken by Mr. Verma.
4.	Place the glass on the table.	Let the glass be placed on the table.

- Given below are a few instructions to prepare a cup of hot tea.
 1. Put one cup of water into a pan.
 2. Put the pan on the stove.
 3. Let the water boil.
 4. Add ½ teaspoon tea leaves and some milk.
 5. Add sugar according to taste.
 6. Boil for some time.

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7. Strain into a cup.
8. Serve hot

Exercise

Read the above instructions carefully and fill in the blanks to complete the paragraph below. Remember to use the passive voice when describing the process of making hot tea.

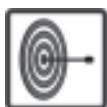
A cup of hot tea

First of all _____ is _____ into a pan. The pan is _____. The water is _____ to boil. Then $\frac{1}{2}$ a teaspoon of _____ and some _____ are added. Thereafter, sugar _____ according to taste. The decoction is _____ to boil. It is then _____ into cups and _____ hot.

- **Note:** Refer to the following for more inputs in doing the above exercise:

23.3 Let Us Learn Grammar – The Village Pharmacy – Active & Passive Voices

23.4 Let Us Write - Cooperate and Prosper – Describing a Process, Time/ Sequence Markers



WHAT YOU HAVE LEARNT

In order to save our non-renewable resources from getting completely used up, and to protect our Mother Earth from getting polluted, it is important for all of us to take definite steps today. The lesson tells us that 'Reuse' and 'Recycle' are two habits that we should all develop. We must use anything and everything to the maximum limit and not let it get wasted. Waste like empty cans, old books, notebooks, broken buckets, utensils should be recycled so as to save energy, electricity, money, manpower and resources. The way in which different waste products are recycled is different. It is easy and profitable to recycle some materials as compared to others. It is important to avoid some wasteful habits of Western countries in order to save Earth's resources.



TERMINAL QUESTIONS

I. Complete the following using the correct alternatives:

1. Recycling refers to
 - a. the conversion of waste materials into new and useful things.
 - b. the conversion of new and useful things into some other form.
 - c. the conversion of old useful things into a different form.



Notes



Notes

2. Rubbish burning should be avoided to
 - a. create pollution.
 - b. increase pollution.
 - c. reduce pollution.
3. Plastic recycling is the most difficult because of
 - a. its various colours.
 - b. its various varieties.
 - c. its various sizes.

II. Answer the following in no more than 50 words.

1. Why is it important to recycle waste?
2. How can recycling help in checking global warming?
3. Reduce, Reuse, Recycle shall be our motto.
 - a. Explain why this should be our motto.
 - b. Give one example of each action in daily life.
4. Think of an alternative title for the passage and justify it.
5. Imagine that no waste material is recycled. What would be the outcome? Write any three outcomes.
6. Complete the following slogans:

Recycle paper Save _____

Recycle metals Save _____

Recycle today Save _____



ANSWERS

20.2.1 PART 1

INTEXT QUESTIONS 20.1

- I b. We should burn our rubbish - False
 Burning actually increases pollution.
- II Reusing of waste is beneficial as it will help to save our natural resources which are limited in quantity. The reuse of waste will reduce the pollution caused by burning it.