

GUIDE BOOK FOR CONDUCTING NON FORMAL COURSES

ON

RESPONSIBLE WASTE HANDLING IN THE COMMUNITY (BASED ON : MY CLEAN AND WASTE FREE NEIGHBOURHOOD)



Urban Hygiene and Environment Education Programmes(UHEEP)
Urban Development through Local Efforts project (*udle*)

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Foreword

In the urban areas of Nepal the environmental pollution is increasing and the health and the well being of the municipal population are in jeopardy. Hence, the sanitary living conditions have to be improved. This challenging task cannot be done by the municipality alone: The ability of a society to improve its living conditions cannot be fully utilized if the population does not feel responsible for their environment.

The municipal population should be aware of their own potential in collaborating actively with the municipal administration in responsibly handling their waste. This book with its playful approach will make it easy for concerned members of the society to realize the negative consequences of dumping waste carelessly in the neighborhood and to develop strategies and use technologies to solve the problems on a personal level as well as on a community level.

In this way, we believe, the waste-problem can be solved on a sustainable social basis and the neighborhood will be a more pleasant and a more healthy place to live for its population.

We hope this book will be used by participants as well as by volunteers and facilitators involved in the non-formal education sector.

Mr. Bishwa Nath Aryal
Joint Secretary
Ministry of Education

Mr. Satya Bahadur Shrestha
National Non-Formal Education
Council Secretariat
Chief and Member Secretary
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Preface

This guide book is designed to assist facilitators in giving sessions to adults in responsible waste handling within their neighbourhoods or wards. The objective of the facilitators and participants is to take part actively in creating a clean and waste free environment. While focusing on increasing knowledge , it encourages to practise skills and helps develop attitudes towards improved habits in waste handling.

In conjunction with the participants' handbook "My Clean and Waste free Neighbourhood", a reading-cum-work book for participants of non-formal classes on solid waste handling , the guide is prepared for those facilitators/volunteers who are interested and feel capable to motivate and prepare the municipal population for environmentally sound handling of their waste. The pages with teaching suggestions, specified as header should be understood only as guidance/assistance for developing skills to carry out activities individually and collectively such as observing, describing , discussing, comparing , investigating and using technologies for responsible waste handling. The other part of the guide is the same as the participants handbook with the same pagination as the footer.

We would suggest that those facilitators who are not yet experienced in teaching environment/ hygiene education will actually follow the suggestions. We would like to encourage them at the same time to use their own creativity in adapting the suggestions to the special needs of the participants and the environment . The more experienced a facilitator becomes, the less s/he will need the suggestions for teaching and the easier it will become for her/ him to teach in her/his own style.

The guide book was developed with the active participation of facilitators of Lalitpur Municipality and some NGOs of Bhaktapur to test and evaluate the suggestions.

We hope that facilitators will find the guide useful!

June 1997

**Urban Hygiene and Environment Education Programmes
(UHEEP/udle)**

**Few words on the Guide book of waste handling prepared for the
facilitators of non-formal education programme on
proper solid waste handling**

Introduction

The problem of waste disposal is growing in urban as well as in rural areas everyday. The population, the households, the shops and restaurants as well as the industries can reduce their waste production drastically. In order to explain how this can be possible, we designed an educational programme on responsible waste handling techniques consisting of ten sessions directed to householders and responsible active ward members. The sessions should be implemented through the non-formal education facilitators, health workers or volunteers working with municipalities, NGOs ,CBOs etc.. The program intends to achieve the following purposes:

Main purpose of the programme:

1. **Make people aware of the waste problem and its health, environmental , social , aesthetic and economic consequences.**
2. **Make the people aware of the responsibilities towards their household waste.**
3. **Motivate the people to solve the problems of their household waste.**
4. **Teach the people skill on reducing the waste production their reuse and recycling.**
5. **Give the people ideas on how to organize themselves in their neighbourhood to solve the waste problem.**
6. **Inform the people on how to cooperate with the municipality in proper disposal of those leftovers which still remains after reusing, recycling/ composting and taken away by the scavengers.**
7. **Suggest the people to collect household leftovers properly so that it could be give or sold to the scavengers if they do not have time or interest in recycling or reusing.**

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The Guide Book

The guide at hand assists the facilitators of adult literacy or awareness programs to teach the participants on responsible waste handling techniques. We hope that the classes on waste handling which can be conducted on the basis of the guide book will contribute to equipping the participants, women and men, with better knowledge, positive attitudes towards responsible waste handling and skills of managing their household waste and their community waste.

The learning material:

The text in the learning material: "My Clean and Waste free neighbourhood" can be read by the participants if they are able to read. Otherwise it should be read to them by the facilitator. Considering that a number of participants have just gone through the basic literacy classes, their reading capacity is still quite limited. The wording in big letters could be read by them, giving them the chance to practise their reading skills at the same time as they learn about proper waste handling.

The session plans:

The sessions are divided into two parts: the first part consists of information about the subject matter, objectives of the lesson and the required teaching material for the facilitators. This part should be read before teaching. The second part consists of didactic and methodological recommendations for teaching. In this second part, different steps are given which should be followed one after another during the sessions.

Teaching materials to be used during the sessions:

In the teaching process the following materials will assist you:

1. The book "My Clean and Waste free neighbourhood"
2. Poster "What we can do to reduce the waste?"
3. This guide book

We recommend to follow these guidelines to the lessons, at least until you feel more familiar with subject, the teaching material and the participatory teaching approach.

Then feel free to modify the teaching/ learning activities, following the same objectives:

- Modify the pattern of questions
- Adopt the stories to suit the local culture of environment

However, you might modify the teaching / learning process it is very important that the lessons should be directed towards behavioral changes. Practical home assignment should be given which is reviewed and discussed during the next session. This way a responsible action oriented attitude towards proper waste handling can be brought into families.

The short description of ten sessions included in the guidebook are as follows;

<u>Sessions</u>	<u>Titles of the sessions</u>
Session 1	- Introduction to different sessions
Session 2	- Investigation of the waste accumulation and waste management in the neighbourhood
Session 3	- The consequences of dumping waste
Session 4	- Ways of responsible waste handling
Session 5	- Reducing waste by preparing compost
Session 6	- Reducing waste by recycling/reusing of leftovers(theory)
Session 7	- Paper Recycling (Practical Exercises)
Session 8	- Reuse of inorganic leftovers(manually)
Session 9	- Recycling of leftovers(manually)
Session 10	- Organizing joint cleaning activities in the neighbourhood and planning of the future activities

Overview of the sessions

The first session is an introduction to the training course in which the participants express their individual problems and needs for improvement of the hygiene and sanitation of their neighbourhood.

In the second session, the problem of waste in the direct surrounding should be discussed. The consequences of carelessly dumped waste for the environment and our inner well-being will be highlighted in the third session focusing on different aspects, the environmental and health aspect, as well as the social aspect, the aesthetical and even economic aspects. In session 4 different ways of proper waste handling are being introduced. Reducing the waste production more than 60% by preparing compost out of organic leftovers such as kitchen and garden waste is explained in session 5. Sessions 6,7 and 8 introduce ways of reusing and recycling certain leftovers at home such as plastic bags, tins and paper. This reduces the waste accumulation considerably and at the same time gives use to a number of inorganic leftovers. In session 9, the waste materials which can be recycled industrially are introduced and ways on how these leftovers can get to the factories are being discussed.

Following these advises the waste accumulation in our households is being reduced to a high degree. How to become active in proper waste handling within the ward and how to prepare future action plans in this regard are also discussed in session 10. Not only our house but also our neighborhood should be pleasant and clean. Getting together with neighbours to join efforts in cleaning, composting, contacting scavengers could assist to solve our individual household waste as well as to keep the ward clean.

While conducting all the ten sessions according to the guidebook, you will have to follow different teaching methodologies as given below:

Methodologies

1. Participatory Approach : Emphasis should be given to the active participation of the participants while conducting the sessions
2. Group Approach : Always organize the participants in groups whenever appropriate
3. Group discussion and presentation : Problems are discussed in groups and findings are presented to a plenary session.

4. Practical exercises : Motivate participants to actually practice something related to session objectives
5. Review and Recapitulation : Always begin the new sessions with a brief review of previous sessions by the participants. At the end of the session always give the summary or main points of the particular session.
6. Home Assignments : Emphasis on home assignment to make the best use of session time spent by the participants.

Dear Friends!

This programme is aimed at improving the waste handling behaviour of the urban population. The participants are introduced to different ways of waste handling. If we cannot follow these ways in our daily life and motivate others too in this aspect, it certainly can lead towards establishment of a positive system of waste handling habits which would be very safe and sound for our environment as well as to our health.

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for the facilitators handbook

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The book “My Clean and Waste free neighbourhood”

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for participants

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Session 1: Introduction to the Training Course

Part 1: (to be read before conducting the session)

1. Subject matter

The first session is meant to be an introduction to the actual training course. The purpose of the first session is to get to know each other, to express one's own particular problems related to solid waste, needs and expectations and to listen to those of other participants from the training program. At the same time the facilitator gets a first hand insight of the felt needs and the possibilities of the participants to take actions in responsible waste handling and therefore improving the hygienic and the environmental conditions of their neighbourhood. It is important for the facilitator to keep the remarks of the participants in mind and to base the following training days on the basis of the information collected in the first session, in order to take into consideration the participants' actual problems, arising from lack of hygiene and sanitation. They all had decided to join the training because they are interested to learn steps and strategies to improve the hygiene and the environment of their neighbourhood. A discussion about gender specific needs and responsibilities should be encouraged to assist the participants to define their roles and the roles of their family members in responsible waste handling.

The facilitator should address the following sessions towards discussing the individual problems, finding answers to these problems for different family members and practice skills of solving them.

2. Objectives of the session: At the end of the session the participants will be able to:
- a) describe the purposes of the course
 - b) preview the waste disposal problems of their localities
 - c) mention the subjects to be dealt in during the course.

3. Materials required to conduct this session:

1. sample copy of the book "My clean and waste free neighbourhood"
2. poster "What can we do to keep our community clean?"

Part 2: (to be followed during the session)

Step 1

General introduction:

Initiate the session by requesting the participants to introduce themselves to each other in an informal way (the introduction can be arranged in a playful manner). The facilitator can start to set the standard, talking about her/his profession/activities, family status, home location etc.

Step 2.

Explain the purpose and the nature of the training by stating that during training:

- we will increase our awareness of the solid waste problems, develop a sense of responsibility towards solving the problems and practice skills to handle waste in an environmentally sound way.
- we will get to know waste handling technologies, will discuss, demonstrate, practice and play games.

Step 3.

Invite and encourage the participants to share their views openly on the basis of some questions on sanitary and hygienic conditions of the community.

Ask the participants to answer the following questions:

- Do you have a problem of waste in your neighborhood? Describe it!
- What would you need to improve the hygienic condition of your neighborhood?
- What do you expect from this course?

By referring to the various types of problems resulting from improper waste disposal as presented by the participants the facilitator introduces the following ways of responsible waste handling.

Keep the poster "What can do to keep our community clean?" in such a place that every one can see it and explain the following points:

Ways of Environmentally Sound Waste Handling

1. As far as possible do not produce waste!
2. Organic waste should be used for composting!
3. Other leftovers can be reused in different ways and not just thrown away!
4. Waste which cannot be reused at your own place should then be handed over to those who can reuse or recycle it!
5. Only the final residuals should be properly disposed! Toxic waste should be disposed with extra care!

Step 4.

Group work/Presentation/Discussion

Divide the participants into 5 groups. Assign one question to each group from the following 5 questions, such as:

- Group 1: What specific problem do men and women face regarding waste?
- Group 2: Who (men/women) makes the decisions as to what to do with the waste in the households?
- Group 3: What do men/women actually do in waste handling?
- Group 4: What particular effects does waste have on men and women?
- Group 5: In what way do men/women need assistance in improving the waste handling?

Step 5.

Ask each group to select one presenter from among the members of the group. Let the group discuss and find answers to the assigned question.

Step 6.

Have the presenter from each group present the answers. Request the remaining participants to provide comments on the presentations. The answers should be discussed and summarized at the end.

Mention that the entire course is consisted of 10 sessions or classes and the duration also will be about 10 days.

Read out the following sessions and their topics saying that they will be dealt sequentially, most probably one topic a day. The participants should be asked to comment on the programme asking questions or proposing certain priorities. Suggestions for the selection of priorities and changes of the programme should be respected as much as possible.

Table of contents:

Session 1: Introduction to the training course

Session 2: Investigation of the waste accumulation and waste-management in our neighborhood.

Session 3: the consequences of dumping waste.

Session 4: Ways of responsible waste handling

Session 5: Reducing waste by preparing compost

Session 6: Reducing waste by recycling and reusing leftovers (theory)

Session 7: Paper recycling (practical exercise)

Session 8: Reuse of inorganic leftovers (manually)

Session 9: Recycling of leftovers (industrially)

Session 10: Organizing Joint cleaning activities in the neighborhood and planning of the future activities

Step 7

Show the book 'My Clean and Waste Free Neighborhood' and tell the participants that almost all the sessions are based on the stories, scenes and messages given in the book.

Step 8.Home Assignment for the participants:

Request the participants to observe their own home and neighbourhoods and find out the waste problems in their neighbourhoods.

Session 2. Investigating our neighbourhood concerning waste accumulation and waste management

The Revenge of the Neighbours

Part 1. (to be read before conducting the session)

Before giving the session, please study the following subject matter and the objectives which are meant to be achieved through the session.

1. Subject matter:

Waste accumulation is a rapidly growing problem in the urban areas. Different kinds of waste are produced at our homes. The waste material may include vegetable peels, used paper, plastic bags, house sweepings, broken glass etc. Often these waste items are thrown/dumped improperly which make the neighbourhood dirty, cause accidents, spread diseases, and create social disturbances among the residents.

To avoid these consequences waste should be disposed properly and people need to change their habits of throwing waste indiscriminately.

This session intends to convey the aforesaid information to the participants with the help of a story called "The Revenge of the Neighbours" included in the following pages of this guide - as well as the participants' handbook. The story tries to reflect the effects of improper waste disposal in our daily life.

2. Objectives of the session: At the end of the session the participants will be able to :

- name the disadvantages of throwing waste indiscriminately
- observe and identify different ways of waste disposal in their own locality
- describe how neighbours react to those who dispose waste indiscriminately
- be conscious in disposing the household waste at appropriate places
- stop throwing waste indiscriminately
- accept neighbours' advice to dispose waste properly

3. **Materials required to conduct this session:**

- Book: "My Clean and Waste Free Neighbourhood" for the participants
- Facilitators Guide to "My Clean and Waste Free Neighbourhood"
- Story: "The Revenge of the Neighbours" (page 1- 7)

4. **Necessary preparation for the session:**

Read the story by yourself, before giving the session and become familiar with the content, the objectives and the methodology how this session should be conducted.

Part 2: (to be followed during the session)

Step 1

Before the participants look at the first scenes declare today's topic.
"Investigating our Neighbourhood Concerning Waste Accumulation and Waste Management"

Step 2

Ask the participants to open page 1 and request the participants to read the scenes 1 and 2 of the story "The Revenge of the Neighbourhood". If the participants cannot read, the facilitator should read aloud.

Step 3

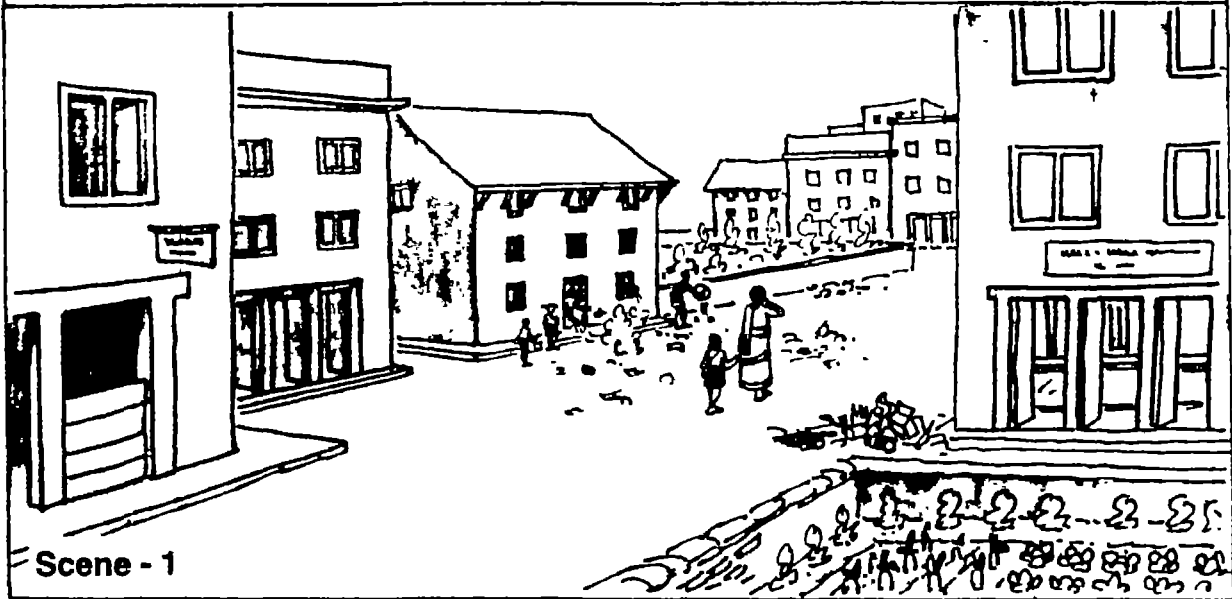
After reading out scene 1 and 2 the facilitator asks the following questions to the participants.

1. Look at scene 1 and tell whether you have the same type of neighbourhood?
2. What other waste items do you find in your neighbourhood, which are not shown in the picture?
3. Look at scene 2, what are the family members throwing onto the street?
4. What types of waste materials are produced at your homes?
5. What do you do with the waste produced at your home?
6. Are there any families, any men, women children or youth in your neighbourhood who throw waste as shown in the pictures of this story?

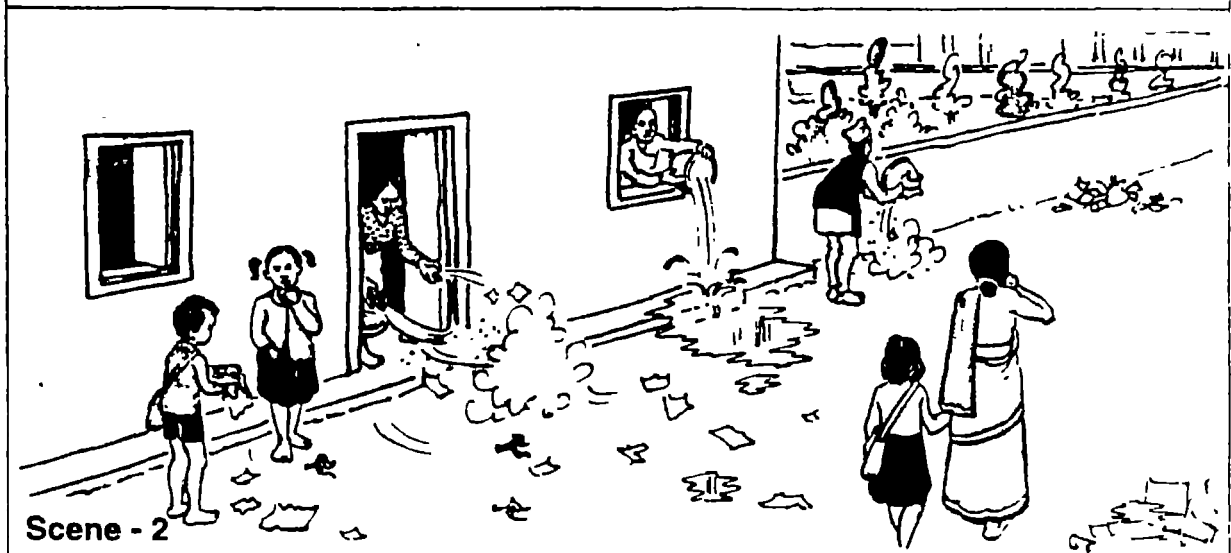
The Revenge of the Neighbours

Investigation of our neighborhood concerning waste accumulation and waste management

Maya lives with her mother in law, her husband and her children, Sita and Ashok, in this neighborhood.



Maya and her husband work. Sita and Ashok go to school and the grandmother is staying in the house. It is a nice family. But they throw their garbage everywhere carelessly.



Step 4

Ask the participants to look at scenes 3 to 9 (page 2 and 3 of the book) as you read aloud.

Step 5

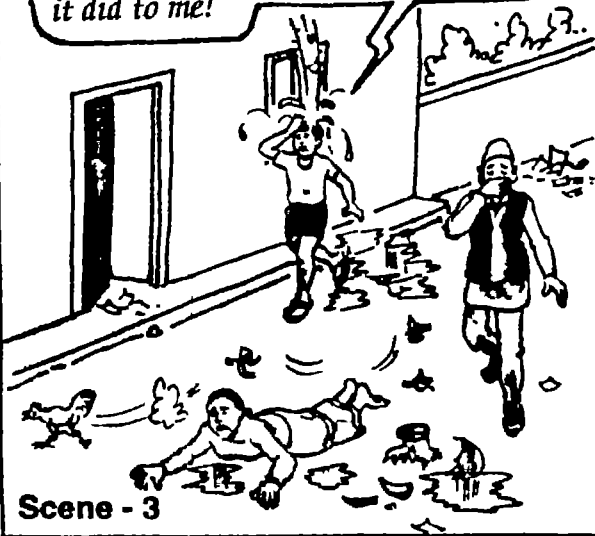
Ask the following questions after the participants are familiar with the scenes and discuss:

1. At what times do people usually throw their waste in the street? (see scene 5)
2. Do you have such families in your neighbourhood too?
3. What is happening in scenes 3 and 6?

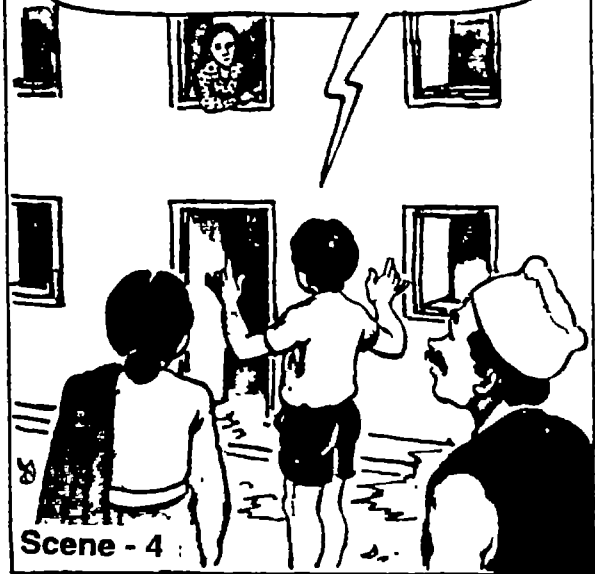
(Turn the page for the following questions concerning the scenes 7 to 9)

Everybody living in the same street is complaining and asking:

Who threw this waste? Look what it did to me!



Please don't litter the street! We do not like to live in a dirty, smelly neighborhood. And we do not want to get hurt!



The family just does not care and continues throwing the waste

We throw our waste where we want.

Dad! now nobody is looking.



Next morning ...

Scene - 6

Again they threw their waste on our street



Step 5 (continuation)

4. What is happening in Scene 8 and 9?
5. Have you ever experienced the similar scenes in your neighbourhood?
6. What may happen if we throw our household waste indiscriminately?
7. Describe the reactions of the neighbours?



Step 6

Let the participants read scene 10 to 16 or read it out loud! Then divide the participants into 4 groups and assign the following scene to each group. Request to look at the scene in detail. Give 5 minutes to look and discuss the scenes.

- Group 1 will look at scene 10 and 11 (page 4)
- Group 2 will look at scene 12 and 13 (page 5)
- Group 3 will look at the scene 14 (page 5)
- Group 4 will look at scene 15 and 16 (page 6)

Step 7

After the participants are familiar with the scenes ask members of each group to report what they have seen in the scene, starting with group 1.

1. Describe scene 10! Why are the neighbours gathering? What are the neighbours discussing?
2. Describe scene 11! What are the boys, girls, men and women doing? Why do you think they are collecting all the waste?

(Turn the page for the following questions concerning group 2 to 4!)

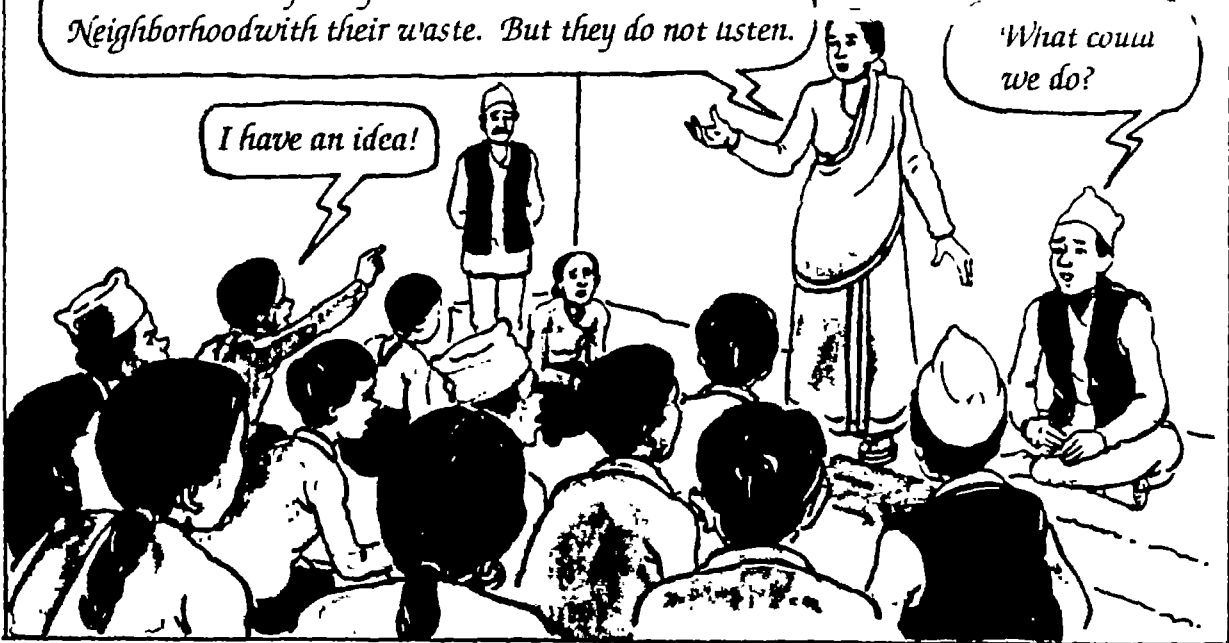
The old lady asks many women of the Neighborhood to discuss what to do.

Scene - 10

We all told that family several times not to litter our Neighborhood with their waste. But they do not listen.

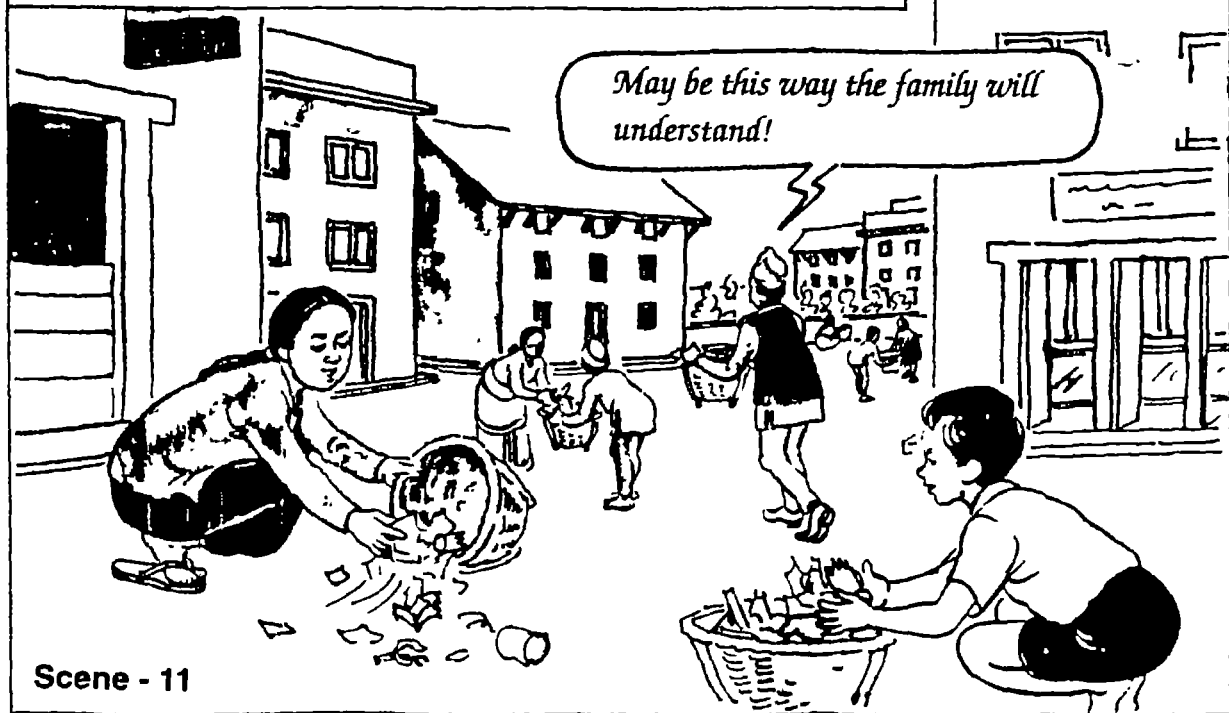
'What could we do?

I have an idea!



Right after the meeting they collect all the waste they can find.

Maybe this way the family will understand!



Scene - 11

Step 7 (continuation)

Ask the following questions to group 2

1. What did they see in scenes 12 and 13 and what did they discuss about the scenes?
2. Where did the neighbours take the waste they have collected from the street?
3. Why have they piled up the waste in front of the family's house?

Ask the following questions to group 3.

1. What did they see in scene 14 and what did they discuss about it?
2. How is the family inside the house reacting?
3. What are the problems being faced by that family?

(Turn the page for the following questions concerning group 4!)

They put all the waste they could find right in front of the house.

Oh, how dirty! It stinks! There are so many flies coming into our house!



Scene - 12

All the litter they can find in the streets they pick up and dump it in front of the house.

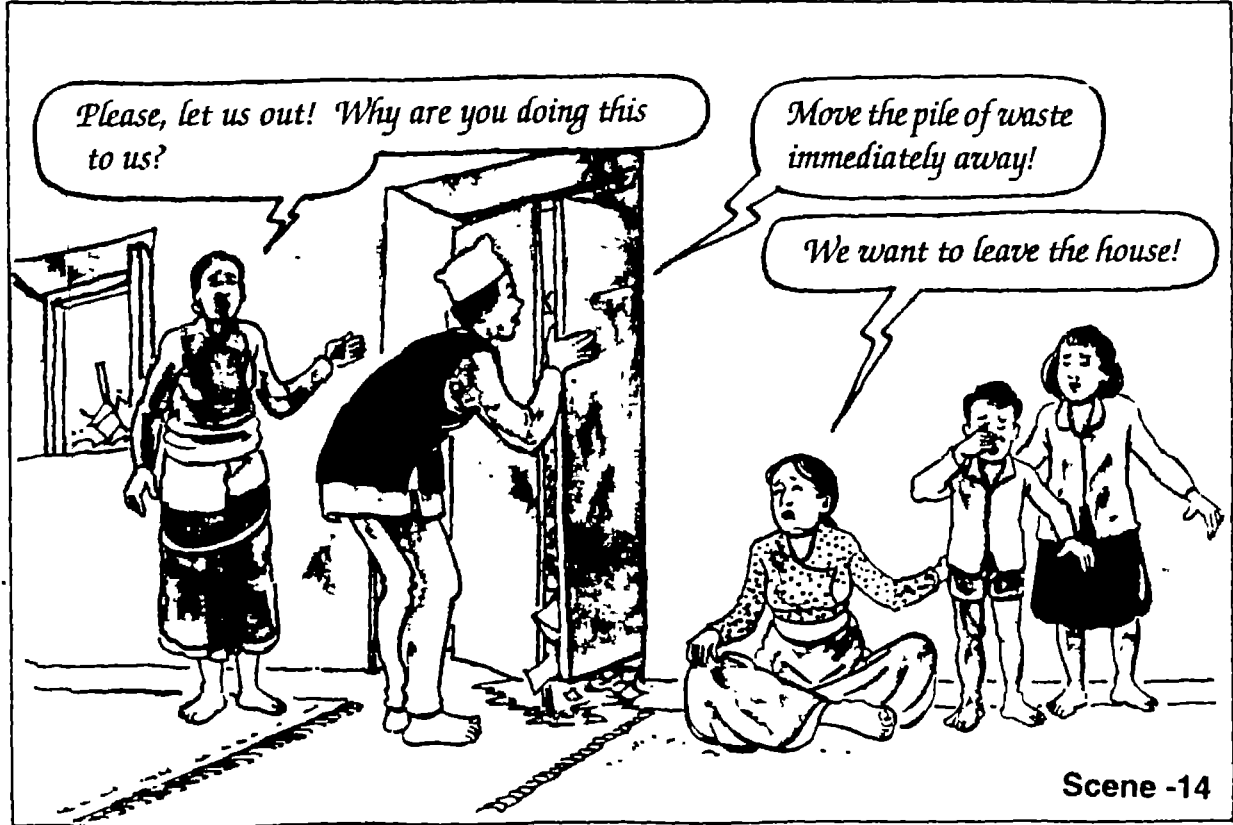


Scene - 13

Please, let us out! Why are you doing this to us?

Move the pile of waste immediately away!

We want to leave the house!



Scene - 14

Step 7 (continuation)

Ask group 4

1. What did they see in scenes 15 and 16 and what did they discuss about the scenes?
2. What is the man and the woman in the house asking for?
3. What do the neighbours expect from the family?
4. What are their preconditions for removing the waste from their front door?
5. Do you consider it an appropriate way to change the family's bad behaviour of dumping the waste everywhere? Give reasons.
6. How could people in the neighbourhood solve their waste problem with a joint effort?

Step 8

Read out scenes 10 to 16 again and discuss with all participants relating to what the groups have reported.

Step 9

Ask the participants to discuss about the necessity to cooperate and to be organized in the neighbourhood, in order to keep the community clean.



Step 10

Summarize today's session :

You learnt from the story:

1. We produce waste at home from our daily activities, such as cooking, shopping, sweeping etc.
2. Both biodegradable and non-biodegradable types of waste are produced at our homes.
3. When we dump waste indiscriminately the neighbourhood looks dirty, diseases spread easily, accidents occur and conflict among the neighbours may arise.
4. People can cooperate and organize themselves to solve problems arising out of indiscriminate waste disposal practices in the community.
5. Every one in the community is responsible for keeping his/her community clean.

Step 11Home Assignment for the participants

Ask the participants to observe the different places of their neighbourhood and find out whether they are clean or dirty. If they are dirty, they should also find out why. They should come up with possible ways of making/keeping their neighbourhood clean.

Lesson learned from the story

The lesson we learned from the story is:

- a) How waste is generated.
- b) What are the consequences of scattered and improperly dumped waste.
- c) How neighbors can organize themselves and improve solid waste handling in their immediate neighborhood.
- d) What kind of behavior should neighbors follow to solve the waste problem.
- e) What are the responsibilities of oneself and others regarding the proper waste disposal.

Session 3: Consequences of improper waste disposal

A Scenes of a City

B How the Whole Family becomes sick?

Part 1 (to be read before conducting the session)

Before giving the session, please study the following subject matter and the objectives which are meant to be achieved through this session.

1. Subject matter

Our surrounding environment has an important role in for our health status. We should not dump the waste indiscriminately in open places, streets and courtyards. Dumping waste indiscriminately in the courtyards, streets, rivers, ponds etc. may harm us in the following ways:

1. The neighbourhood looks unpleasant and dirty.
2. Improper ways of dumping waste produce bad smells.
3. During the rainy season, the waste is washed away and the pathogens get into the drinking water source. This is how epidemics of water-borne diseases such as cholera, diarrhoea, dysentery, typhoid etc. occur during the rainy season.
4. Waste attracts flies and other insects. Many of them breed on waste. It also increases the number of rodents, such as mice and rats. Pathogenic organisms grow in dirty areas and may be conveyed to people by flies, insects and rodents. This way many communicable diseases can be transmitted.
5. Waste lying around the streets may cause accidents.
6. Our surroundings and sources of drinking water become dirty by dumping household waste improperly.
7. Stray animals such as dogs can step on the waste and can transmit pathogens from the waste to places where people are living and eating. Through food, contaminated water or dirty hands people will suffer from diarrhea, dysentery etc.

The aforesaid subject matter should be taught with the help of two chapters given in the book "My Clean and Waste - Free Neighbourhood" namely (A) "Scenes from the City" (pages 8 to 15) and (B) "How the Whole Family Got Sick" (pages 16 to 20).

A

The first topic "Scenes from the City" shows us our improper ways of waste handling and its consequences. It also informs us on how we are contaminating our water sources and making it prone to transfer the diseases like cholera, diarrhoea, dysentery, typhoid etc. Improper waste handling also causes imbalances in the environment affecting animals and plants.

B

Similarly, the story "How the Whole Family got Sick" shows us that improper waste handling habits cause sicknesses. Animals can carry pathogens along with waste to the house floor contaminating the living space of the family members. When food, contaminated by dirty hands, is consumed by one family member, the entire family can suffer from diseases like diarrhoea. Therefore, waste should not be disposed improperly.



2. Objectives of the teaching session

At the end of the session the participants will be able to:

- describe inappropriate waste disposal behaviors of the people.
- name the different dirty places in their neighbourhood.
- name the harms due to such inappropriate waste disposal.
- be aware of the problems due to improper waste handling in their neighbourhood.
- express the need for proper waste disposal practices.

3. Materials required to conduct this session

- Book: "My Clean and Waste Free Neighbourhood"
- A : Chapter: "Scenes from the City" (page 8 to 15)
- B : Story: "How the Whole Family got Sick" (page 16 to 20).
- This Guide book

4. Necessary preparation for the session:

Read the story by yourself before teaching the session and become familiar with the content, the objectives and the methodology how this session should be conducted.

Part 2 (to be followed during the session)**Step 1**

First declare the topic of today's session and distribute the books.

A Scenes of a City**Step 2**

Divide the participants into 4 groups and assign each group with one scene of the Chapter: "Scenes of a City" to look at and to discuss about the message and find possible answers to the questions. The groups should get about 10 minutes time for this task.

- Group 1 will look at Scene 1 and 2 (page 8 - 9)
- Group 2 will look at Scene 3 and 4 (page 10-11)
- Group 3 will look at Scene 5 and 6 (page 12-13)
- Group 4 will look at Scene 7 (Page 14)

Step 3

After participants are familiar with the scenes, ask group 1 the following questions one after another:

- 1) What do you see in the pictures? (Scene 1 and 2)
- 2) What are the different people on the picture thinking and why?
- 3) Is it appropriate to throw waste from the window?
- 4) Why is the bicycle rider falling and the cars not moving?
- 5) Is it appropriate to throw waste on the road? Why?
- 6) Ask the rest of the groups whether the answers given by group 1 are appropriate.
- 7) Let the groups discuss among themselves.

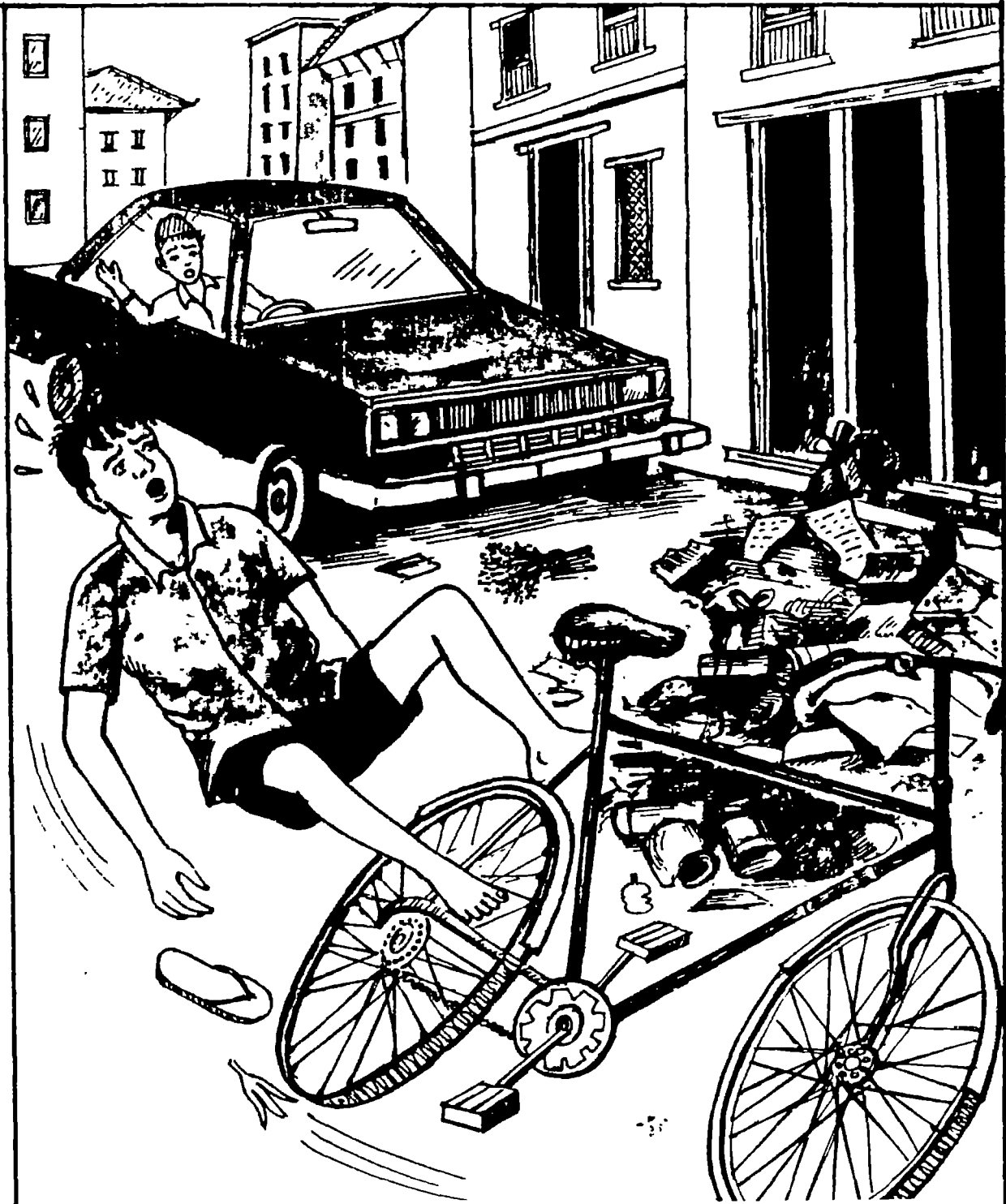
Scenes of a City

The consequences of dumping waste

Scene - 1

What are the different people on the picture thinking?





Scene - 2

Why is the bicycle rider falling and the cars not moving?

Step 4

Ask the following questions to Group 2:

- 1) What do you see in the pictures? (Scene 3 and 4)
- 2) Why are the people on the picture look unhappy, disgusted and sick?
- 3) Is it appropriate to throw waste on the road? Why or why not?
- 4) Which of your actions can contaminate ponds and rivers?
- 5) Is it appropriate to dispose waste in the ponds or rivers? Why or why not?
- 6) Ask the rest of the groups whether the answers given by Group 2 are appropriate and agreeable.
- 7) Let the groups discuss among themselves.



Scene - 3

Why are these people looking unhappy, disgusted and sick?



Scene - 4

Which of our actions can contaminate our ponds and rivers?



Scene -

Why do the plants look so sad? What could we do to make the plants more healthy?

Step 5

Ask the following questions to Group 3:

- a) What do you see in the pictures? (scene 5 and 6).
- b) Why do the plants look withered?
- c) What could we do to make the plants more healthy?
- d) Is it appropriate to dispose waste over or near the plants? Why or why not?
- e) Which leftovers do you identify in the waste pile?
- f) Should all the leftovers be thrown onto the waste pile? Why or why not?
- g) Ask the rest of the groups whether or not the answers given by group 3 are appropriate and agreeable.
- h) Let the groups discuss among themselves.



Scene - 6

Which leftovers do you identify in the waste pile?

Step 6

Ask the following questions to group 4:

- a) What do you see in the picture? (scene 7)
- b) How could the children get sick and hurt?
- c) How should waste be disposed in order to avoid accidents on the roads?
- d) Ask rest of the groups whether the answers given by group 4 are appropriate and agreeable.
- e) Let the groups discuss among themselves.



Scene - 7

How could the children get sick?

Lessons learned from the story

- a How waste can cause accidents?
- b How waste laying on the street effects the pedestrians?
- c How people contaminate sources of water
- d What harm waste causes to plants?
- e What leftovers are mixed with the waste?
- f How waste can hurt children and make them sick?

Session 3 B How can the Whole Family become sick?

(Declare today's topic and ask the participants to turn to page 16)

Step 7

Request all participants to go through scene 1 to 8 (pages 16 to 19) of the story. Allow them about 10 minutes for this task.

After the participants are familiar with the scenes, read out aloud.

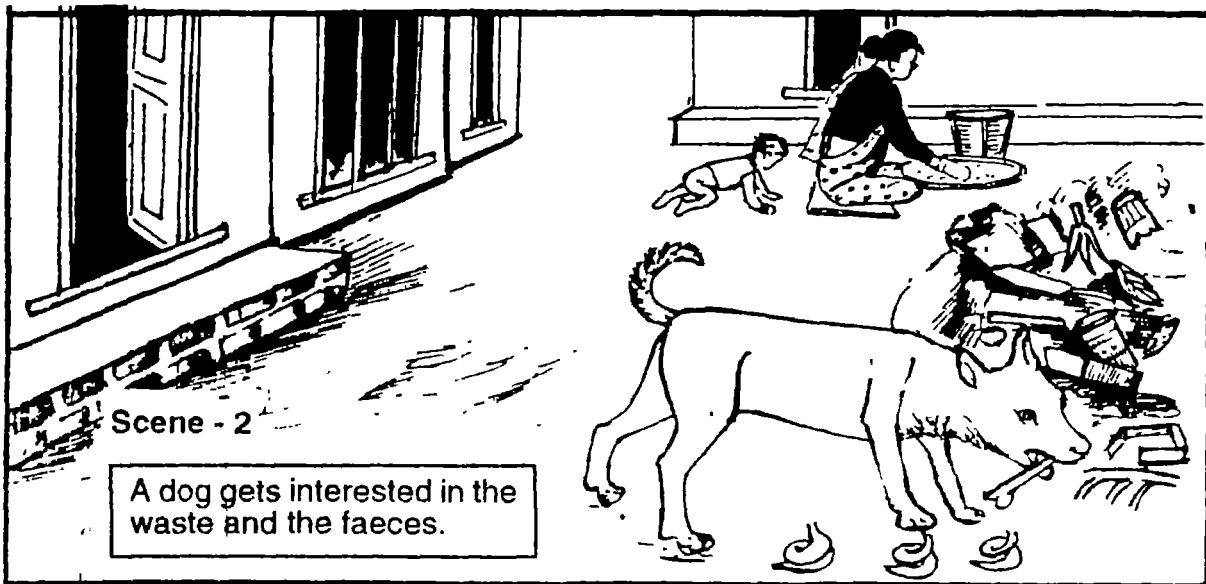
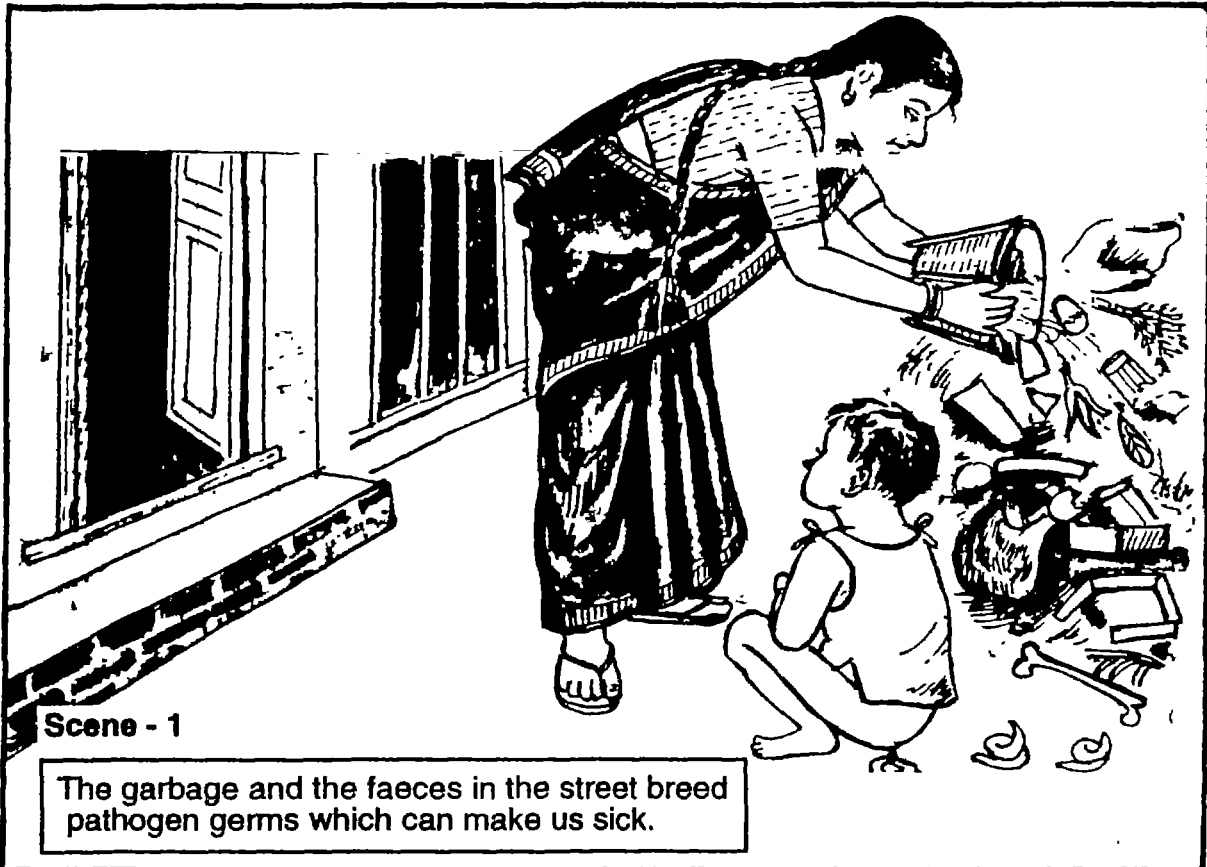
Step 8

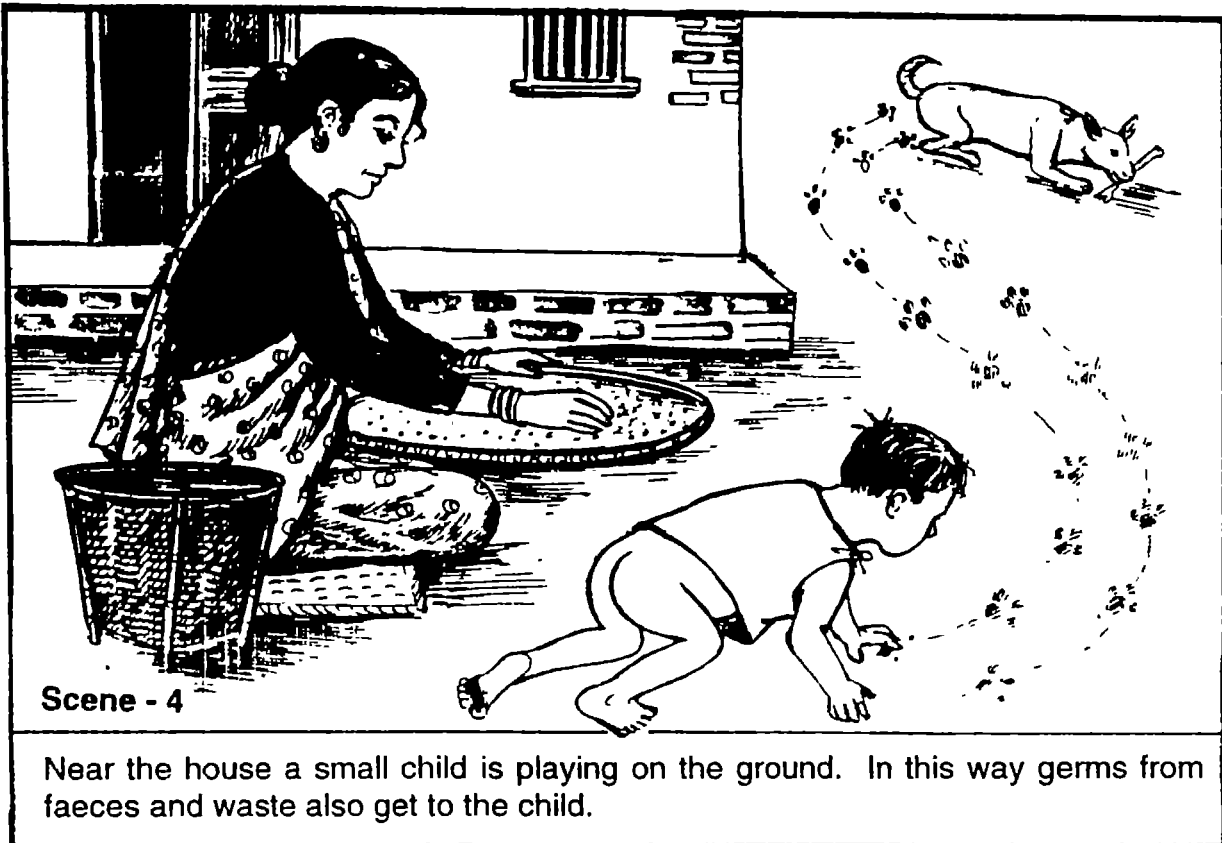
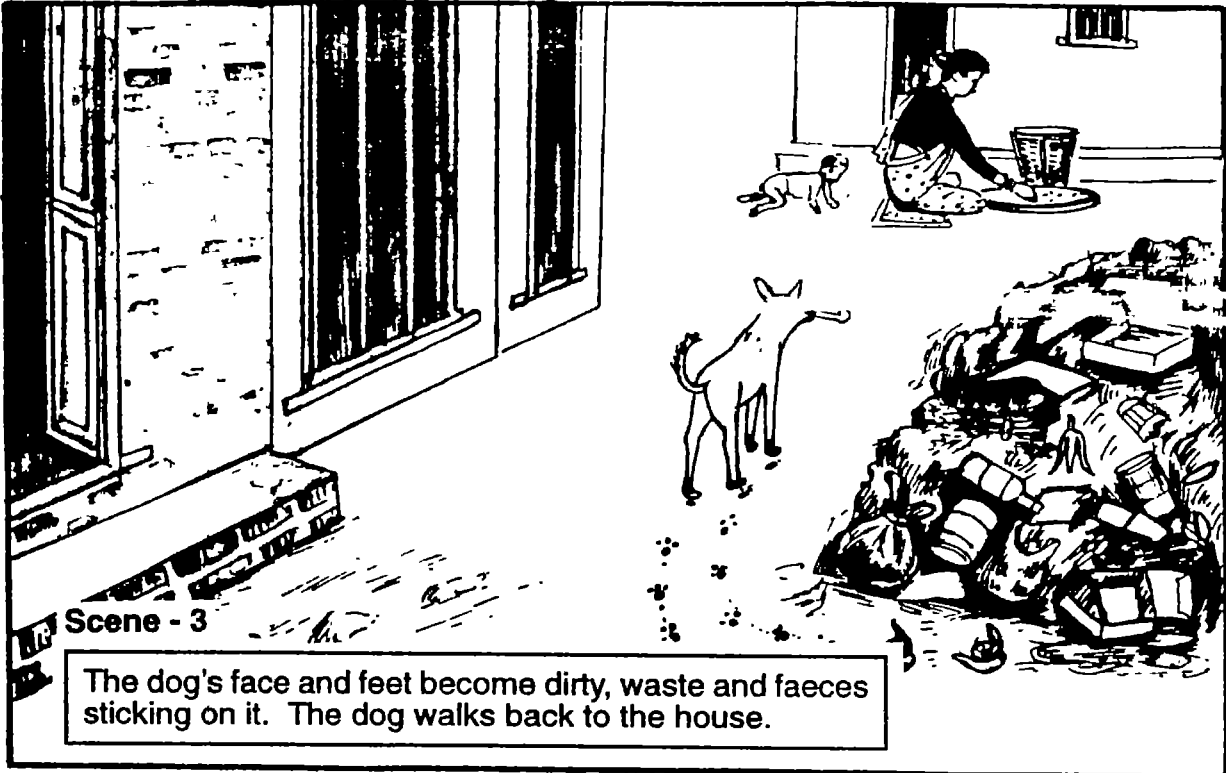
Ask the participants:

- a) to describe what s/he saw and understood from scenes 1 and 4 (pages 16 and 17).
- b) to discuss the answers given with the rest of the participants and decide whether the descriptions given by participants for the scene 1 and 4 are correct and adequate.

How can the Whole Family becomes sick?

The various harmful consequences of indiscriminately dumped waste.





Step 9

1. Ask one of the participants to describe what s/he understood from scene 5 to 8 (pages 18 and 19)
2. Verify with the rest of the participants whether the descriptions given by the participant are correct and adequate.
3. Give your own explanation of the Scene 5 to 8 by reading out the texts given for them.



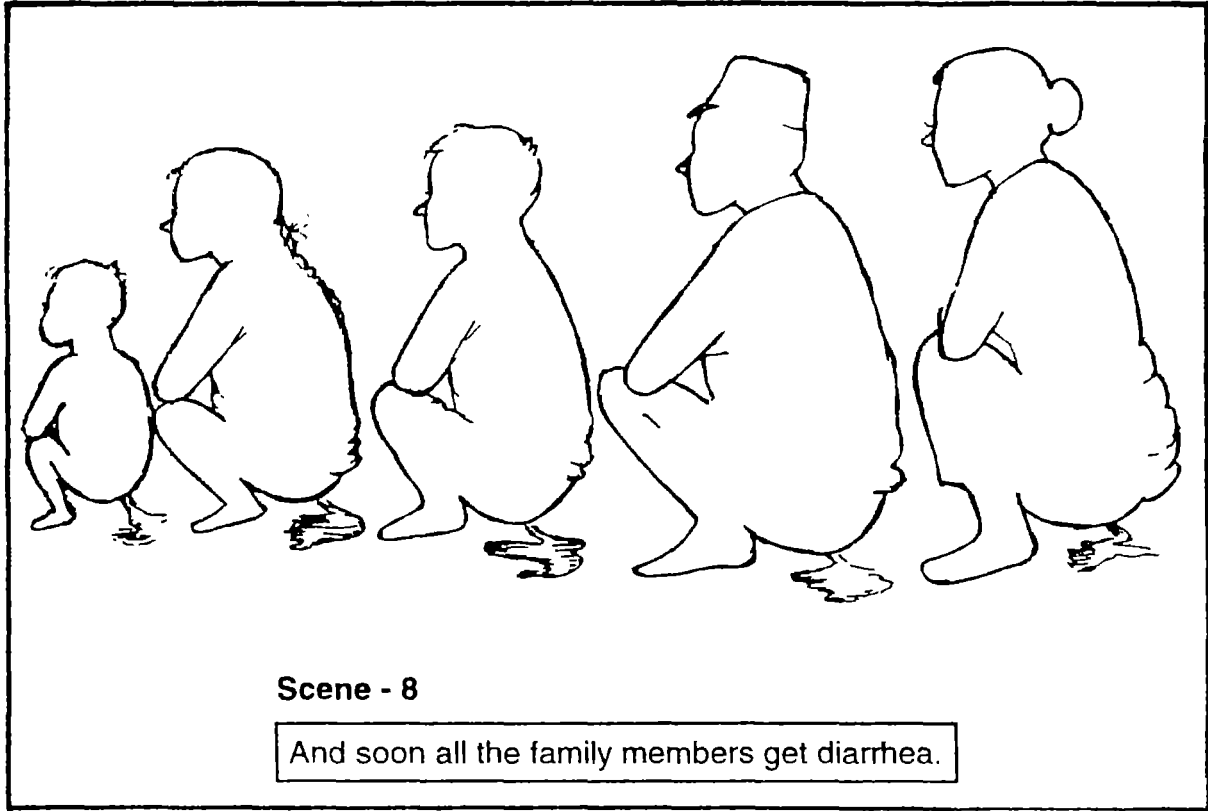
Scene - 5

Later, the child starts to cry, and the mother takes him in her arms.



Scene - 6

Then it is meal time. The mother distributes the food forgetting to wash her hands after handling the child.



Step 10

Summarize the story "How can the Whole Family become Sick?"

Step 11

Now ask the following questions addressing all the participants.

1. Is your neighbourhood clean or dirty?
2. Describe it and give reasons in what way it is clean or dirty?
3. If the waste is dumped or thrown away in your neighbourhood, describe in what way this harms you or others?
4. Are the water sources in your locality clean or dirty? What could be the reasons?

Step 12

Summarize today's session saying that:

There are many harms due to improper handling of waste, such as:

- a) pedestrians get annoyed
- b) accidents may occur
- c) water sources get dirty
- d) bad odor is being produced
- e) plants get effected
- f) animals stepping on the waste may spread diseases, such as diarrhoea

Step 13**Home Assignment for the participants:**

- 1) Observe the dirty places in your locality and tell us your feeling about such places in the next class.
- 2) Talk to 4/5 householders (males and females) asking them about their feeling about improperly thrown waste in their neighbourhood.

Lesson learned from the above story

From the above story, we learned:

- a) the process how the fly and other animals contaminate hands and food;
- b) how an individual may become sick and an outbreak of epidemic may occur in our neighbourhood due to the inappropriate behaviour in waste handling

Session 4: Ways of responsible waste handling

Meeting at the Container

Part 1 (to be read before conducting the session)

Before giving the session, please study the following contents and objectives which should be achieved through the session.

1. Subject matter

Organic and inorganic waste:

The leftovers produced at our homes are of many different types. Some consist of bio-degradables (organic) such as vegetables and fruits, some are non-biodegradable (inorganic) such as paper, plastics, glass, tin cans. If we throw all these waste items together without separating them, it will be difficult to reuse any of them. Instead, if we classify them according to their kind and keep them separately we can transform bio-degradables into compost and reuse or recycle and even sell most of the inorganic waste and get benefits from them.

Waste Management:

Different ways of treating municipal waste and its effects:

- a) Waste gets thrown into the river. If we do so, the waste contaminates the river water by releasing toxic substances (from inorganic waste), which in turn, kills living creatures in the water and makes the water harmful to use.
- b) Waste is often burnt. Burning waste reduces the volume of waste drastically. At the same time it contaminates the air we breathe, which can make us sick.
- c) Waste is often dumped outside the town/city. The town may stay clean, but the surrounding fields get polluted. River water and groundwater can get contaminated. People living near the dumping places will suffer.

- d) The most effective solutions are:
- i. separate the waste according to its nature,
 - ii. reuse/recycle/or make compost or sell it to others,
 - iii. dispose the rest on a well managed landfill site to reduce the danger of groundwater contamination and hygienic risks for the people nearby.

If we do so, we can reduce the waste and its negative impact on our health and environment.

Reduction of waste has several positive effects which are as follows:

- i. Our environment will be clean and pleasant.
- ii. The hygienic risks due to improper disposal of waste will be drastically reduced.
- iii. Public cost on collecting and disposing waste (as Municipality is doing) can be kept to a minimum. The savings can be utilized on other community welfare services like: health services, water and electricity supply, establishing schools, constructing new roads etc.

2. Objectives of the session

This session intends to convey the aforesaid information to the participants with the help of the story titled "Meeting at the Container"

After teaching this session the participants should be able to:

- a) give reasons why waste should be separated.
- b) name the ways of treating waste.
- c) compare the advantages and disadvantages of different methods of waste disposal.
- d) explain the economic burden of improper waste handling to the households and the municipality.
- e) classify waste into organic and inorganic materials and the inorganic waste into reusable and non reusable.
- f) get interested in reducing waste and motivate others to do the same.

3. **Materials required for conducting this session.**

- Book : "My Clean and Waste Free Neighbourhood"
- Story: "Meeting at the Container" (pages 21 to 31).
- This Guide Book

4. **Necessary preparation for the session**

Read the lesson "Meeting at the Container" a day before conducting the class and understand the contents of the lesson and the method how this session should be conducted.

Part 2 :Steps to be taken by the facilitator while conducting the session

Step 1

Distribute the book "My Clean & Waste Free Neighbourhood" to the participants and declare today's session which is "Responsible waste handling" . Tell them that the topic will be based on the story "Meeting at the Container", (page 21 - 31) .

Step 2

Before reading the story, ask the following questions and discuss the answers with the participants.

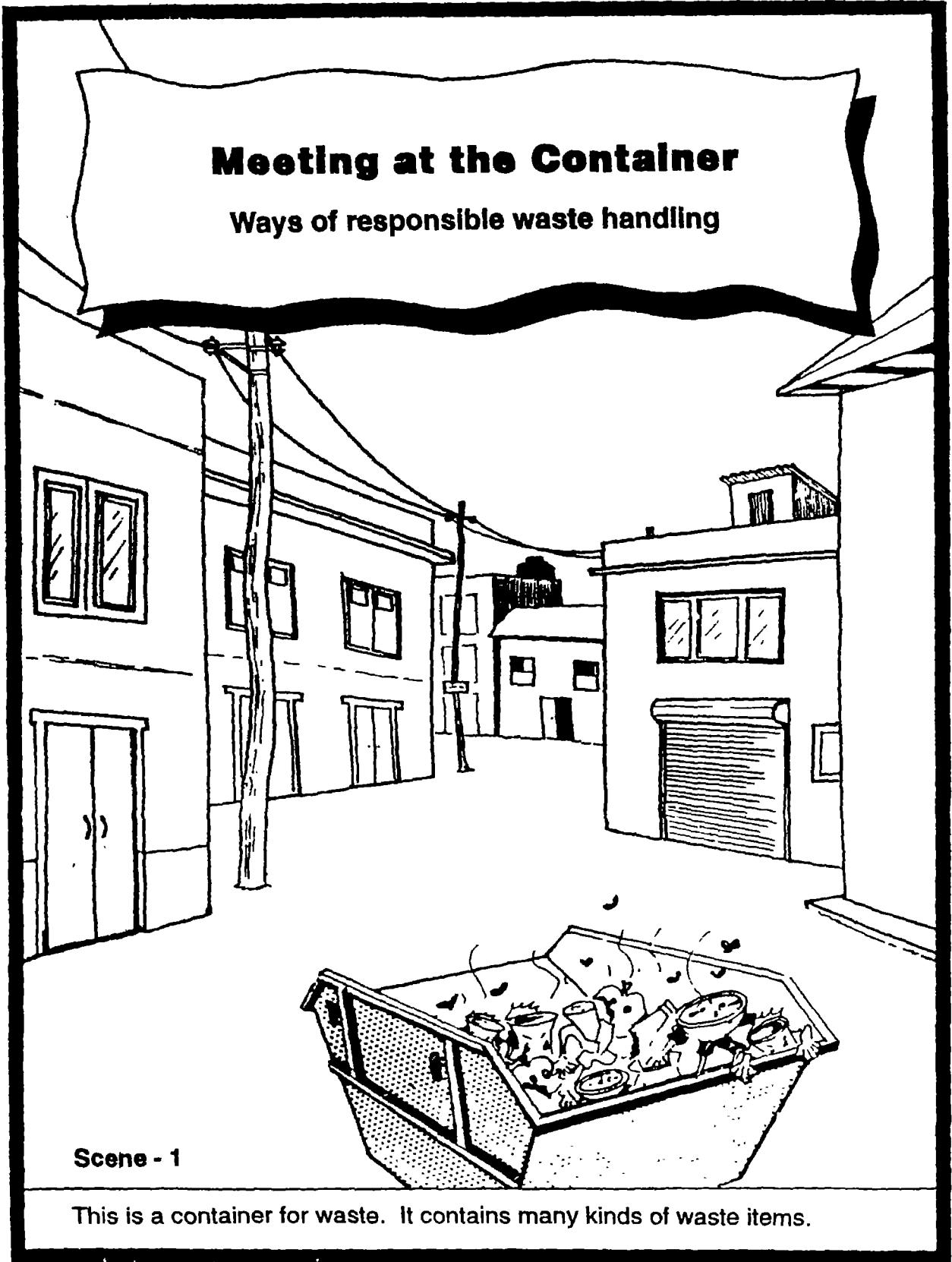
1. What types of waste do your family members(women, men and children) produce in your household every day?
2. How much waste do your family members(women, men and children) produce in your household every day?
3. From where is the waste being produced?

Step 3

If the participants can read, ask one of them to read out aloud from scene 1 to 4 (page 21 - 23) of the story "Meeting at the Container". Tell her/him to also mention who is saying the part e.g. the bottle said, "I am an empty bottle" and ask the remaining participants to look at the pictures carefully as they are being read out. If the participants cannot read, the facilitator should read the story to them.

Meeting at the Container

Ways of responsible waste handling



Scene - 1

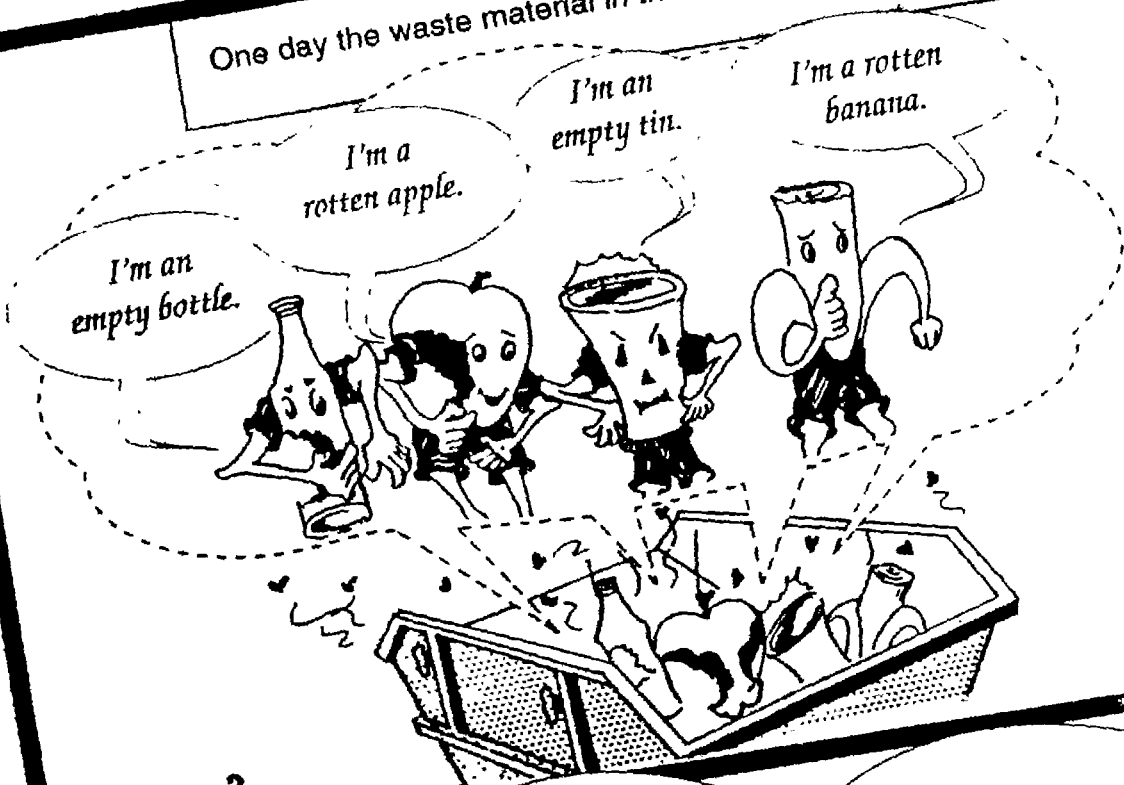
This is a container for waste. It contains many kinds of waste items.

Step 4

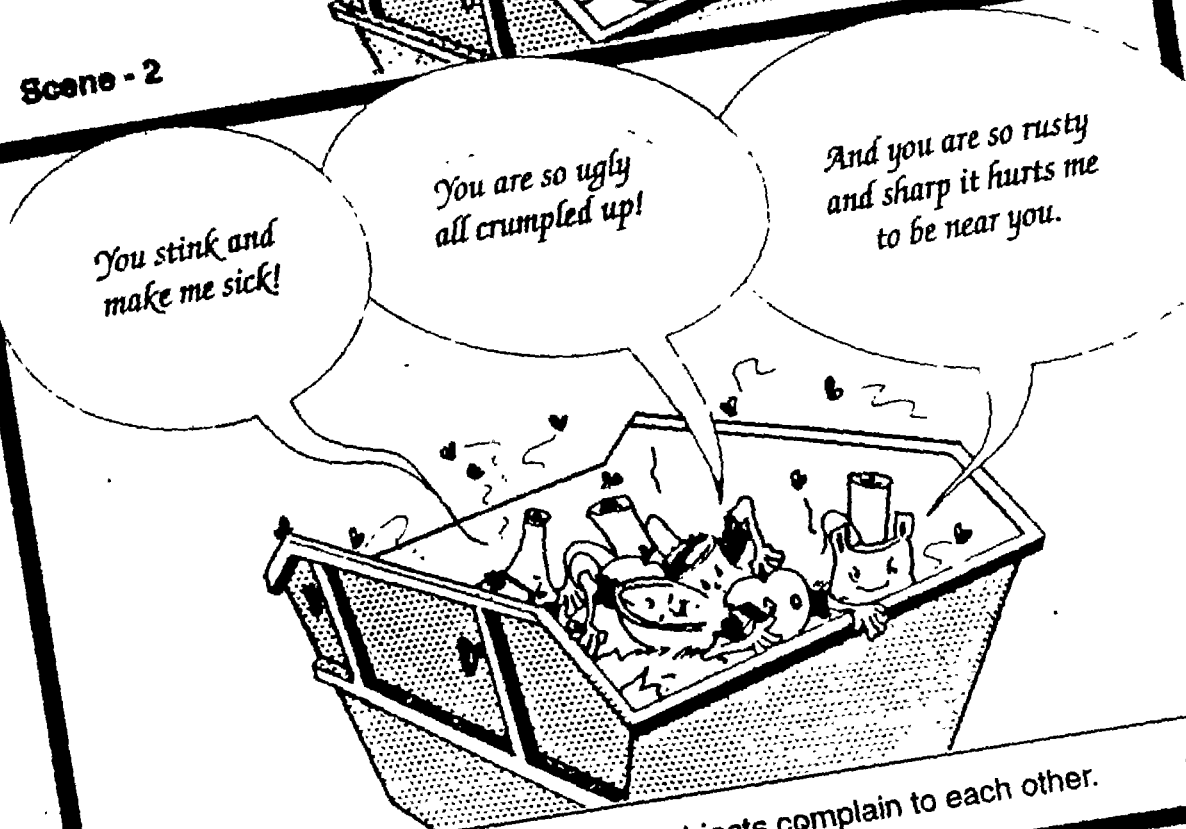
After reading scenes 1 - 4, ask the following questions to the participants:

1. Which of the different waste items can you see in this picture (scenes 1 and 2).
2. Which harms can the waste items bring according to this story (scenes 3 and 4)?
3. Do you have a waste container in your tole? Are there waste piles in your tole? Please, describe. Is it producing similar harms as described in the story? In what way?

One day the waste material in the container starts to speak out.



Scene - 2



Scene - 3

The different objects complain to each other.

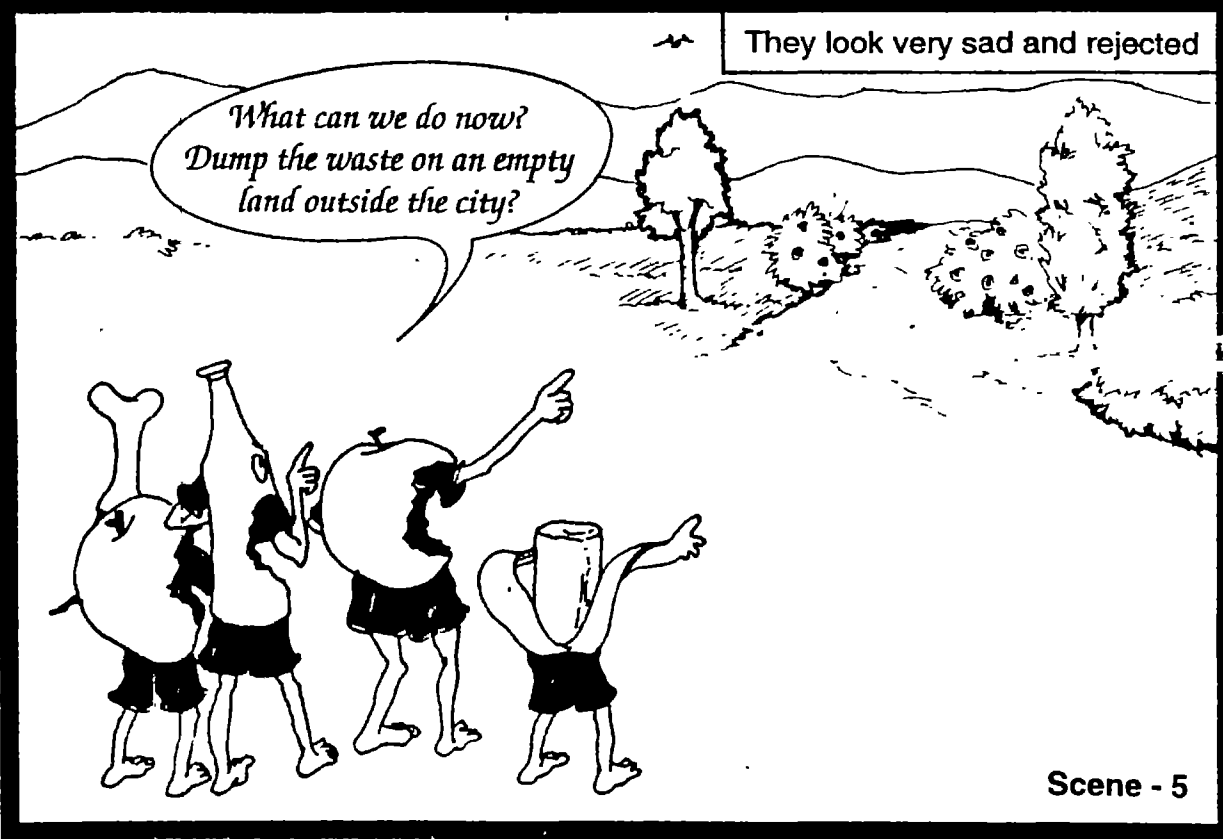
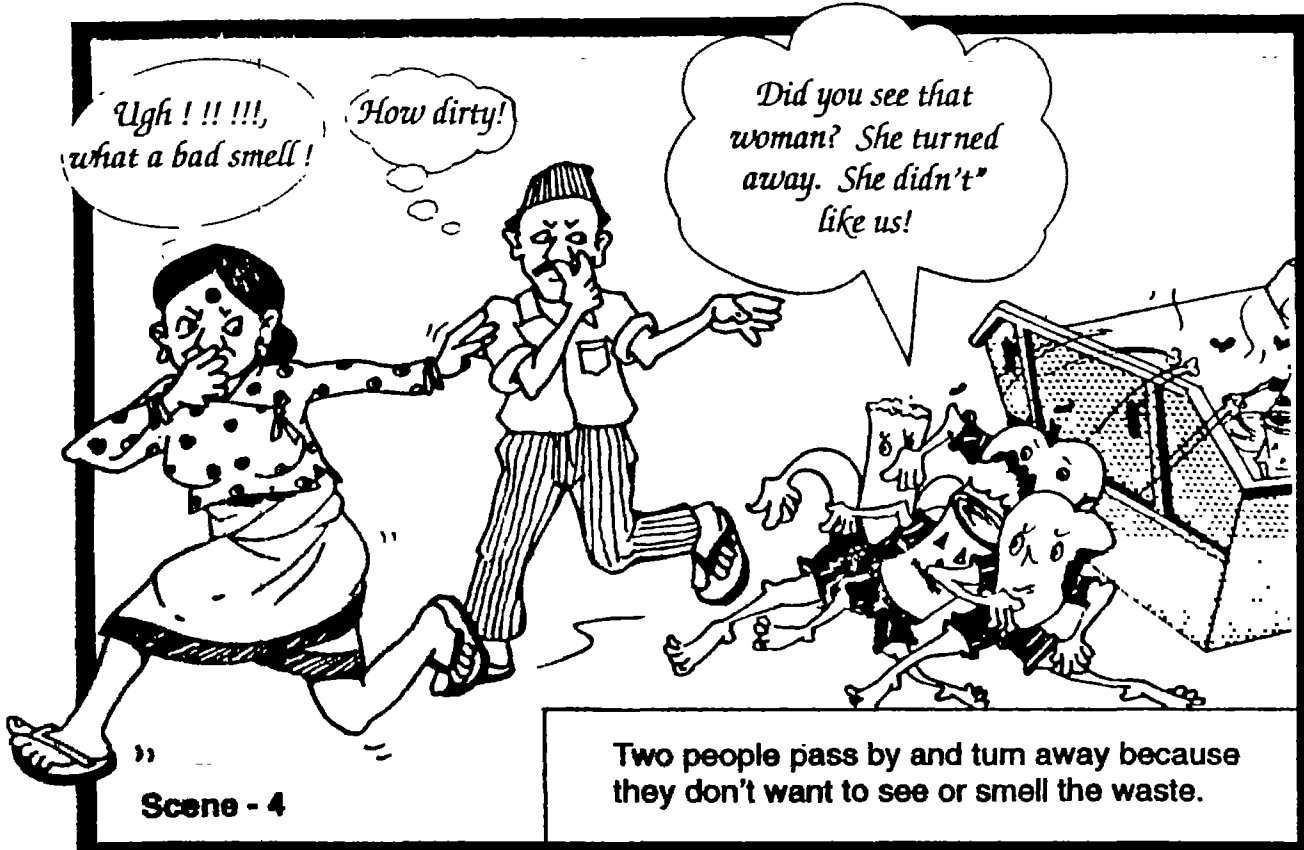
Step 5

Read out scenes 5 to 9 (pages 24 and 25) of the story. Ask participants to look at the picture as they are read.

Step 6

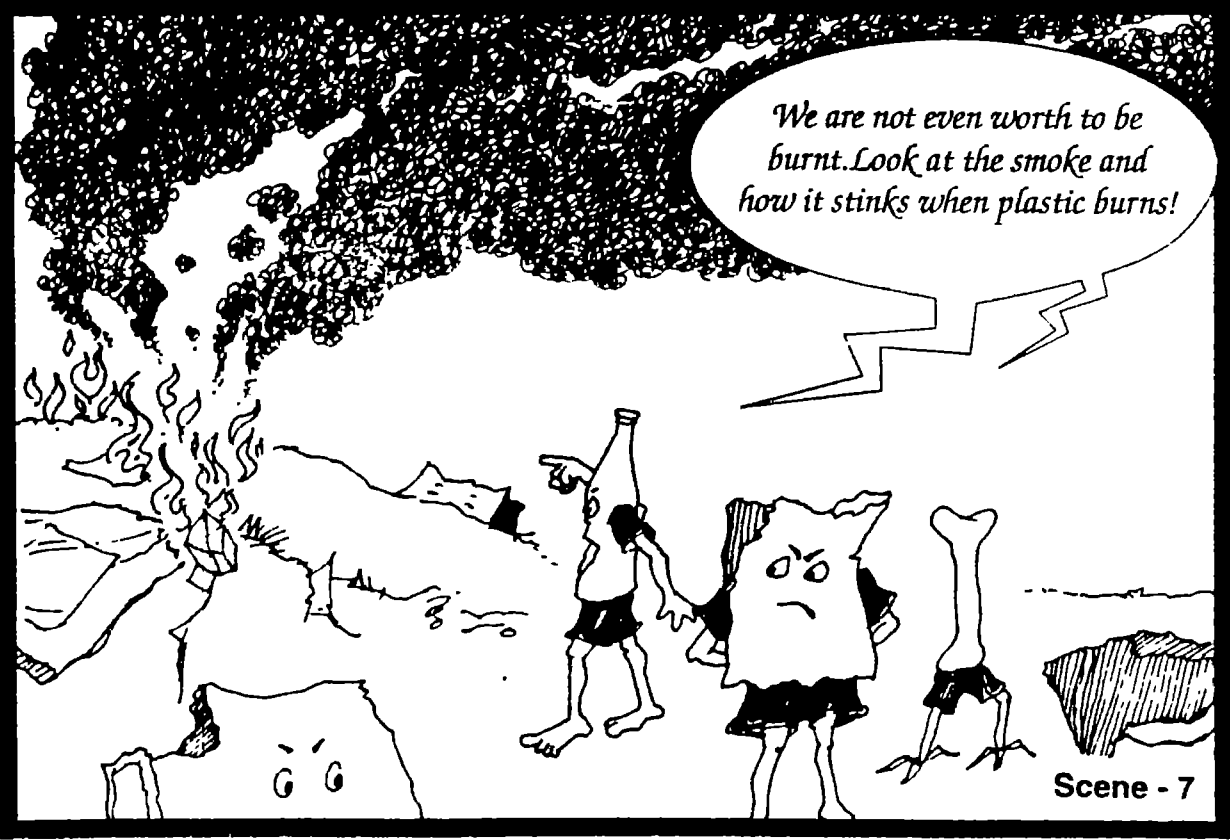
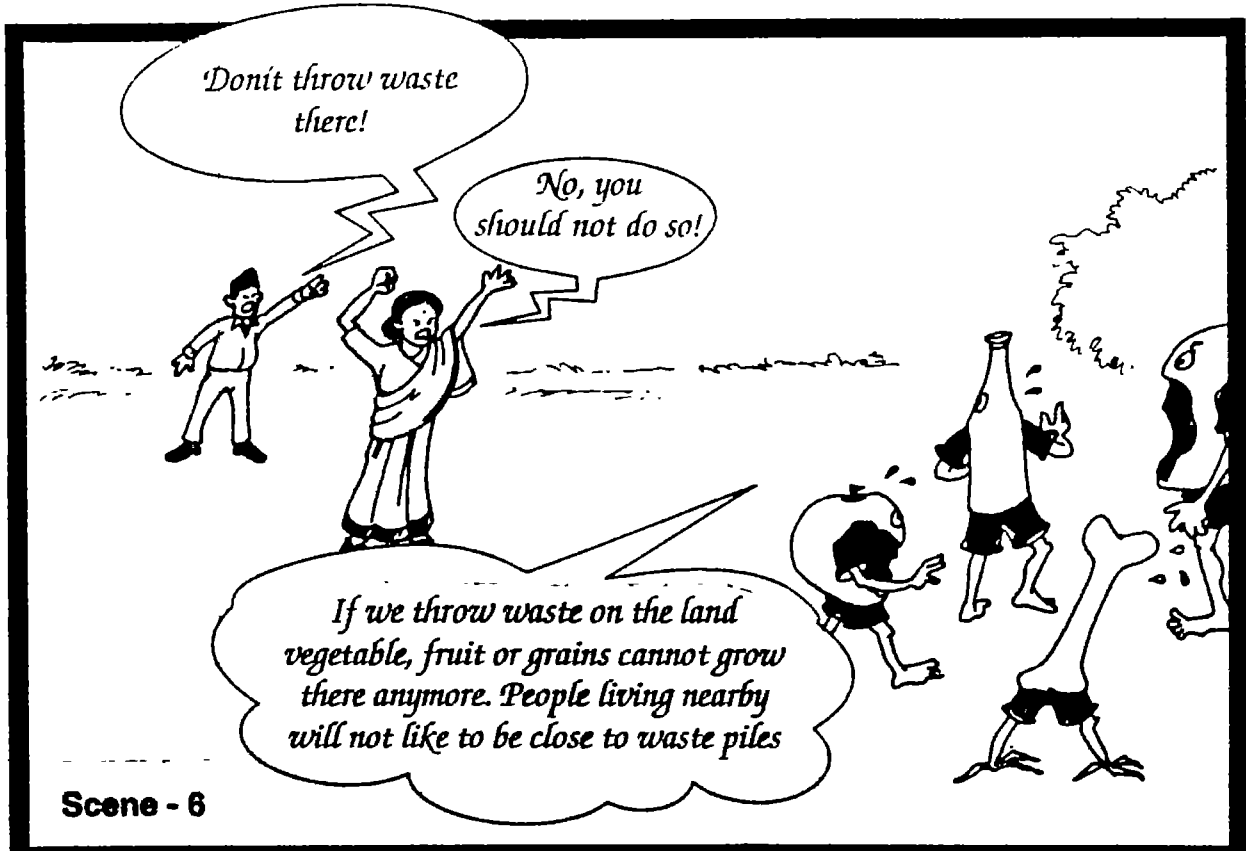
After reading scenes 5 to 9, ask the following questions:

1. Name different places where the waste is being disposed in your community?
2. What may happen if we dump the waste on a piece of land? (scenes 5 and 6).



Step 6 (continuation):

3. Imagine that you live outside the town where the waste produced by the town people is disposed. How would you react?
4. Where do the vegetables you buy in town come from?
5. How can dumped waste harm the growth of vegetables?
6. How can dumped waste on the fields create hygienic risk?
7. What happens, if we burn the waste? (scene 7).



Step 6 (continuation):

8. What happens to the water if we dispose our waste into a pond, river or in a stream? (scenes 8 and 9).
9. Give some reasons why we have to keep ponds, rivers, streams clean?

Step 7

After discussing the answers to the questions, read out scenes 10 - 17 (page 25 - 29). Ask the participants to look at the pictures as they are reading.

Step 8

After reading out scenes 10 - 17, discuss on the following questions:

1. What can be done with used paper instead of throwing it away? (scenes 10 and 11).



Let us try to find a better solution!

I know, let us all go into the river! We can swim and be happy.

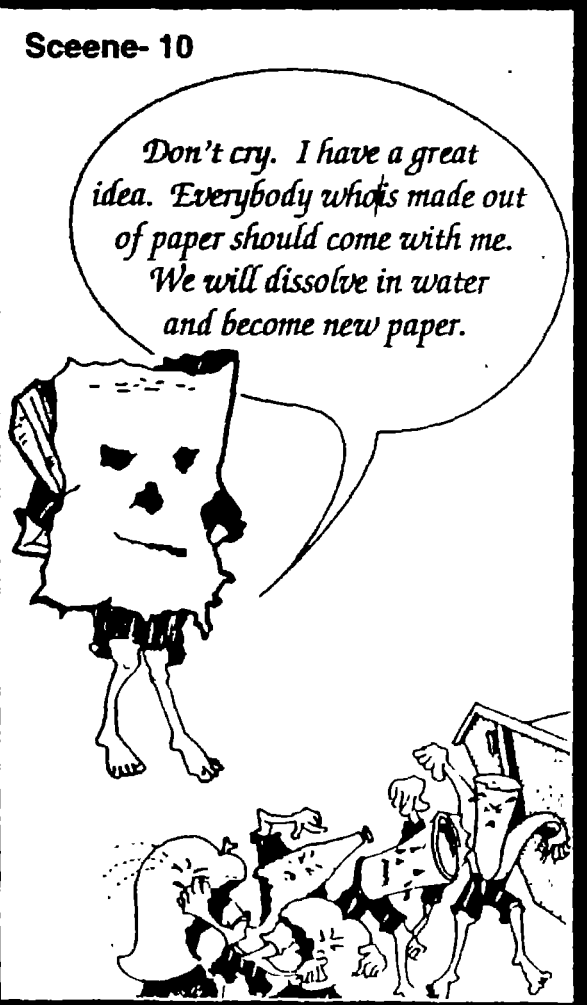
Scene - 8



No! It is not possible. We need to keep the river clean!

Then, where is the place for us?

Scene - 9



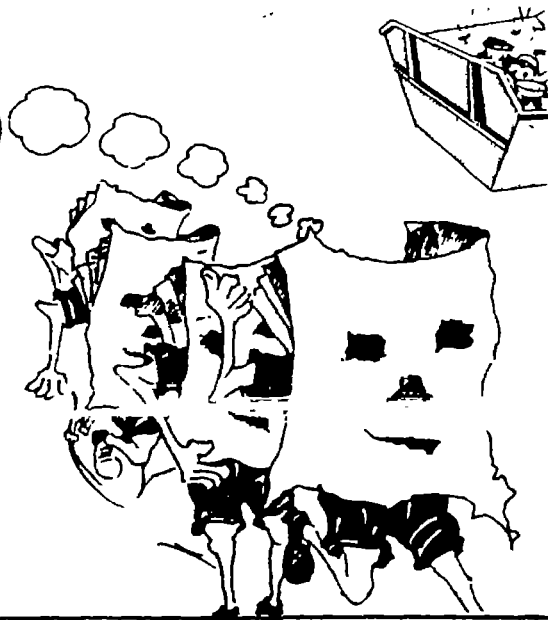
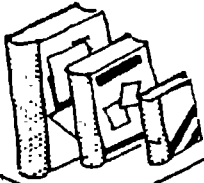
Scene- 10

Don't cry. I have a great idea. Everybody who's made out of paper should come with me. We will dissolve in water and become new paper.

Step 8 (continuation):

2. Give reasons why paper should be reused/recycled?
3. What can be done with used tin cans, and plastic bags? (scene 12).
4. What other ways tin cans and plastic bags can be of use?
5. Give reasons why we should rather reuse/recycle plastic bags and tin cans?

*We would write a book with
the most important secrets inside.
Then everybody would want us.*



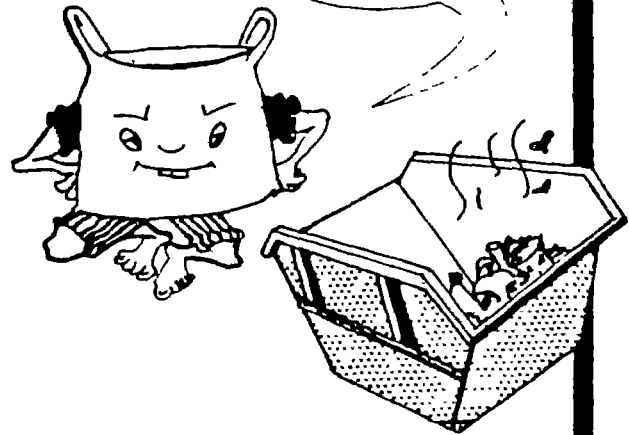
Scene - 11

Thus there is no perfect place for the waste in this world. That is the reason why they are crying. The paper leaves and the waste pile shrinks.

*And I will become a flower-pot
or a pencil-holder when I'm clean and
may be colored/decorated
with paper.*



*And I will get clean and help the
old lady do her shopping. I'll go
to the factory to be turned into
something else made out of
plastic. I will turn into a
pillow, a mat or
a cushion.*

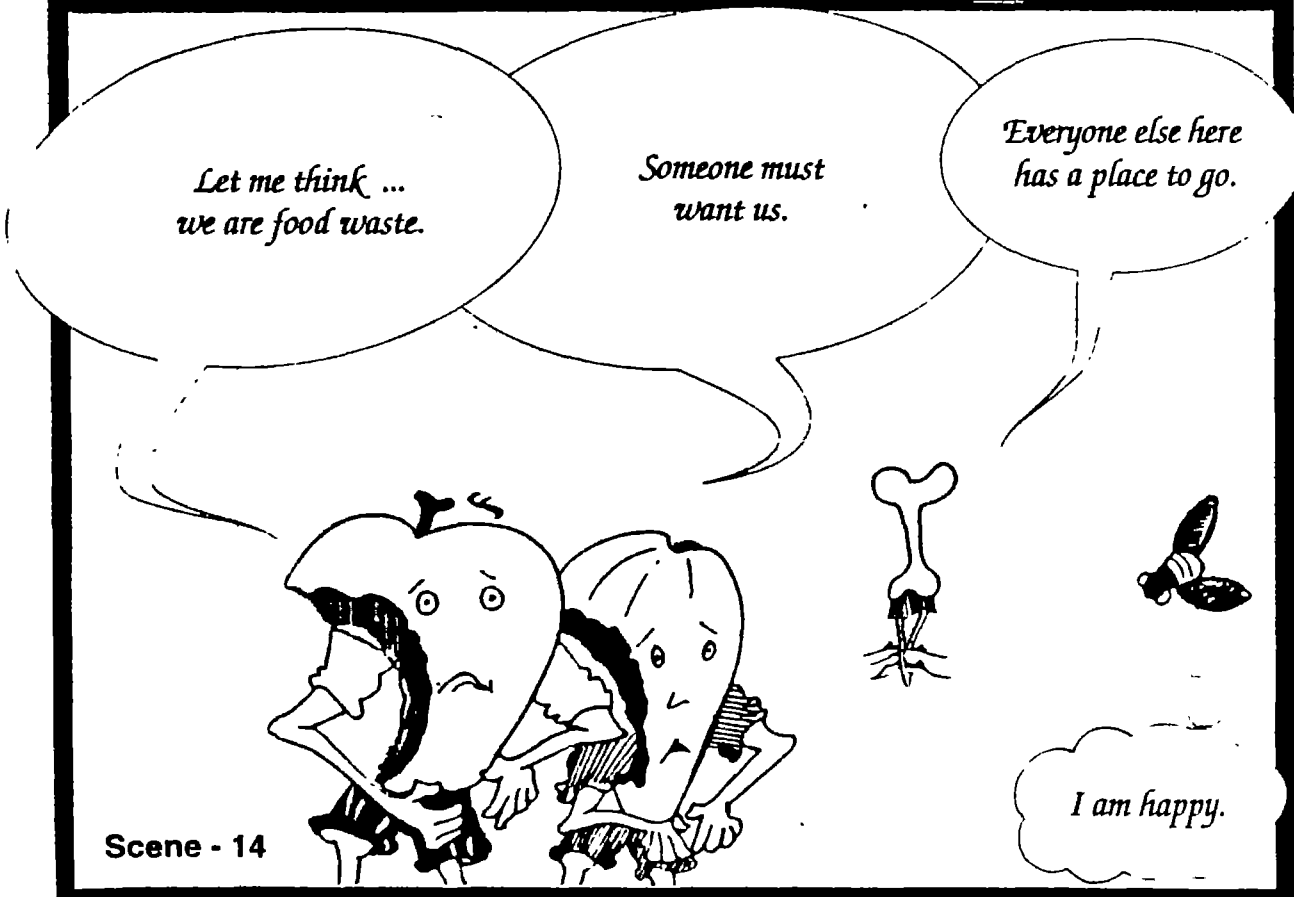
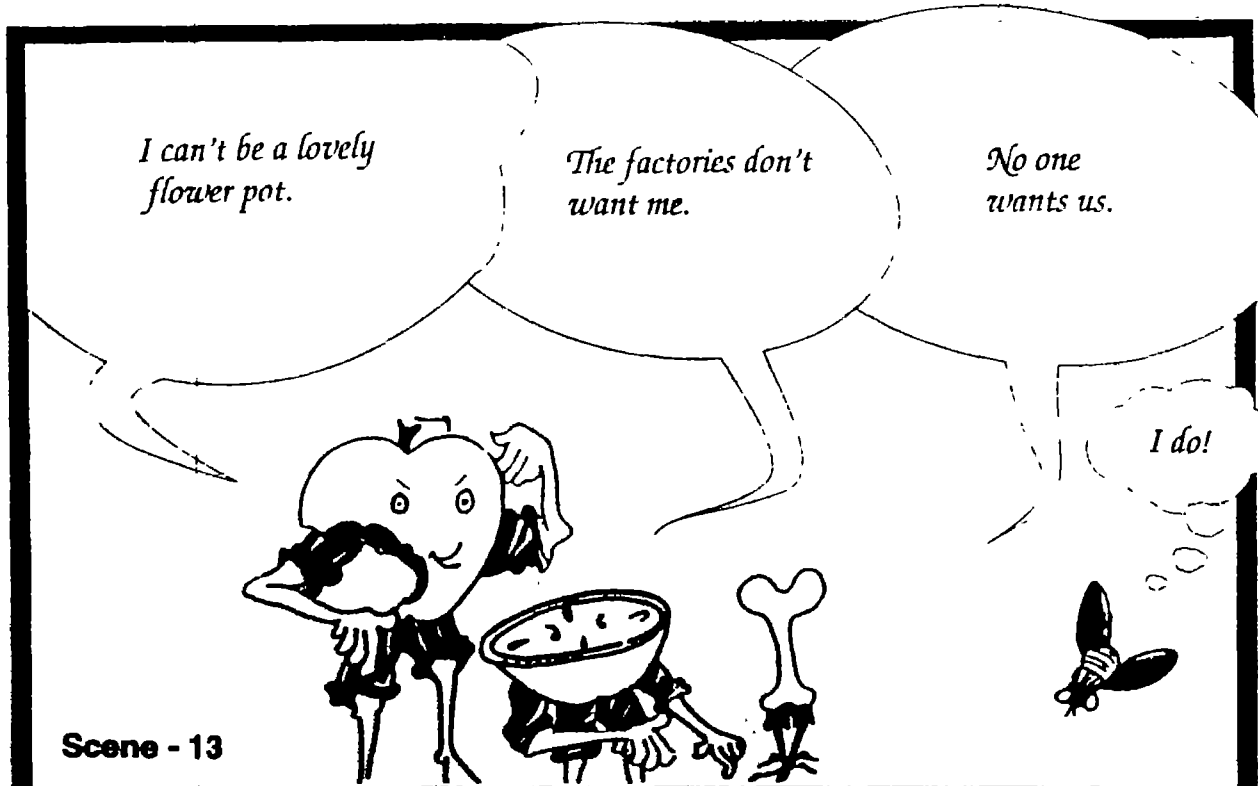


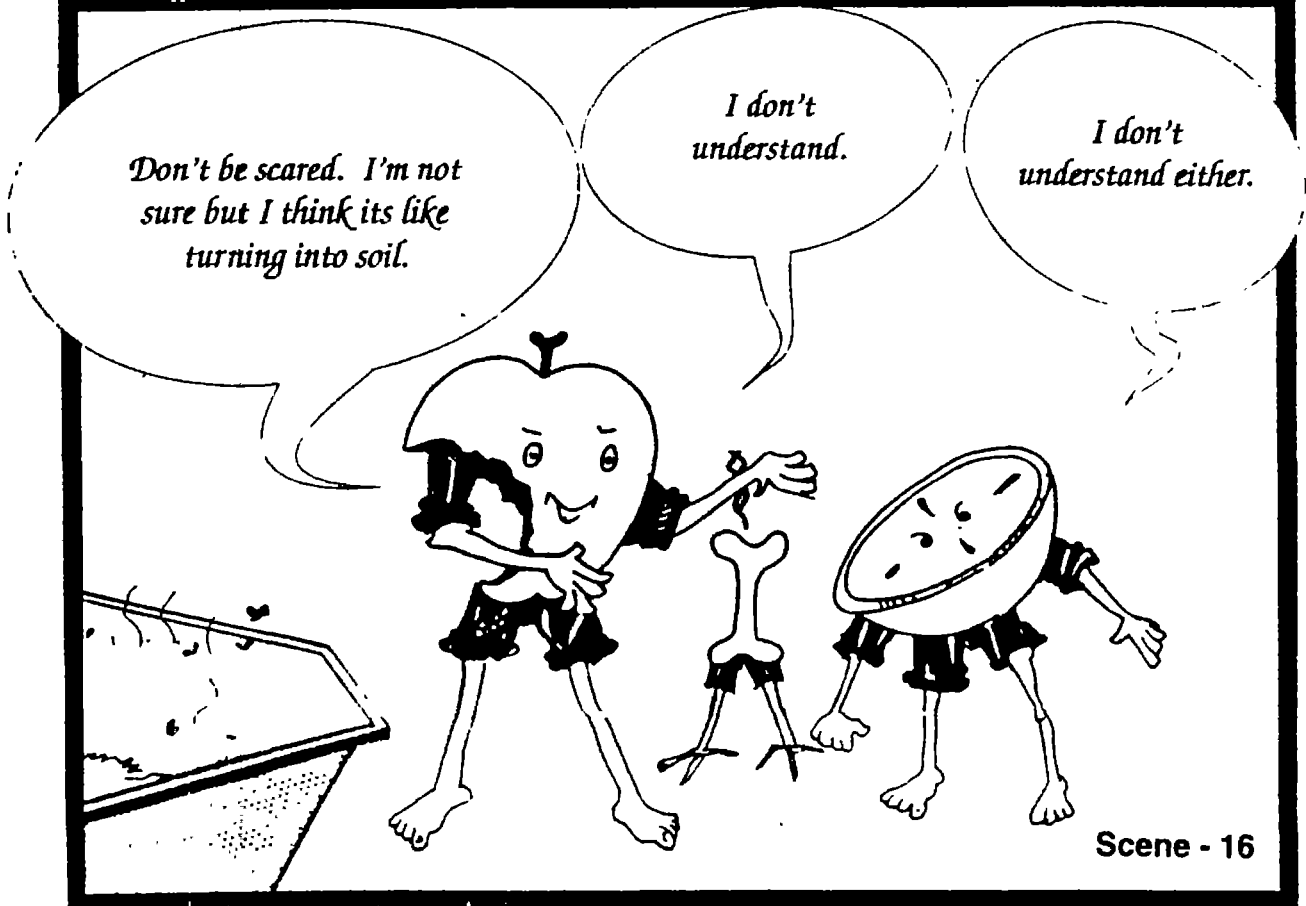
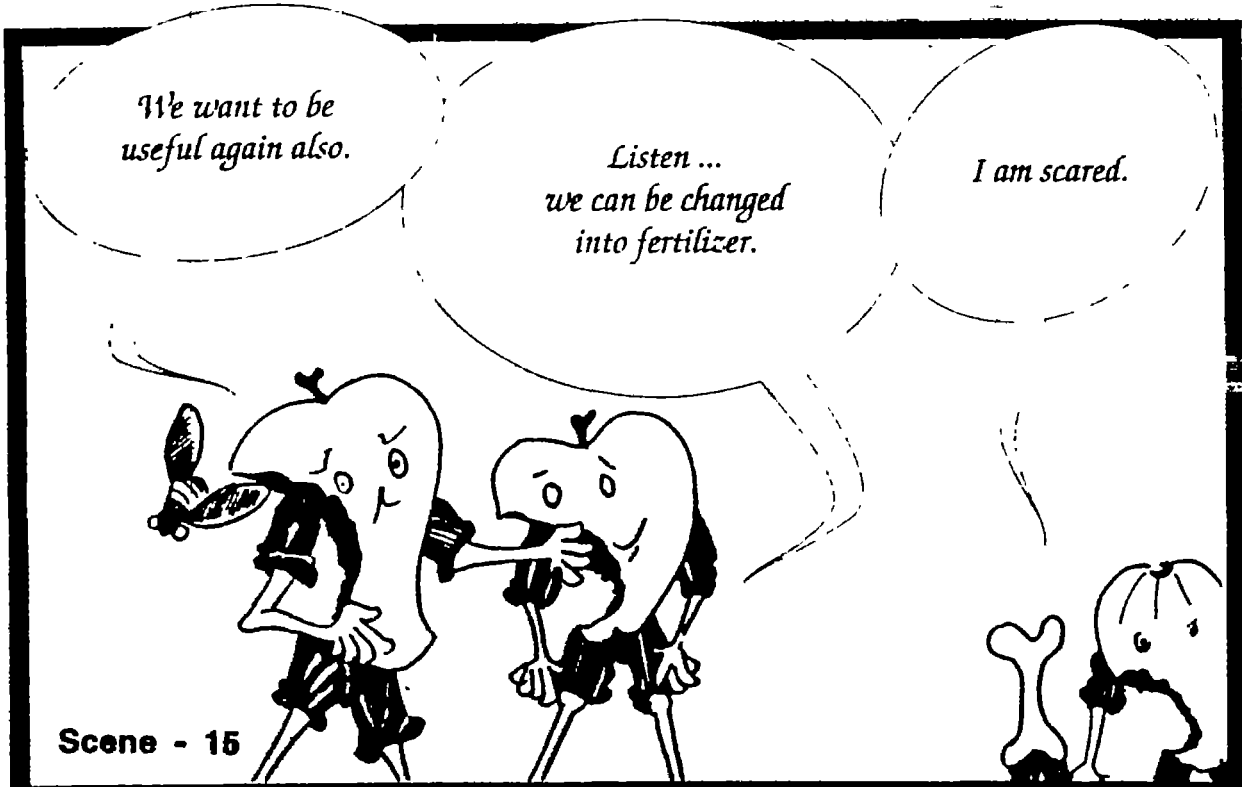
Scene - 12

The cans and plastics leave and the waste pile becomes smaller now.

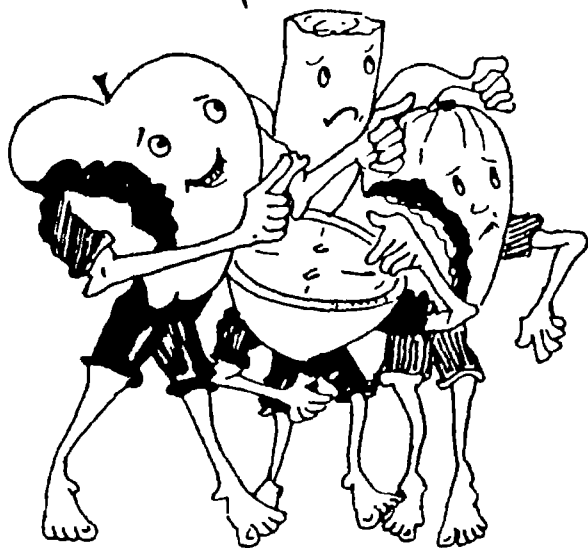
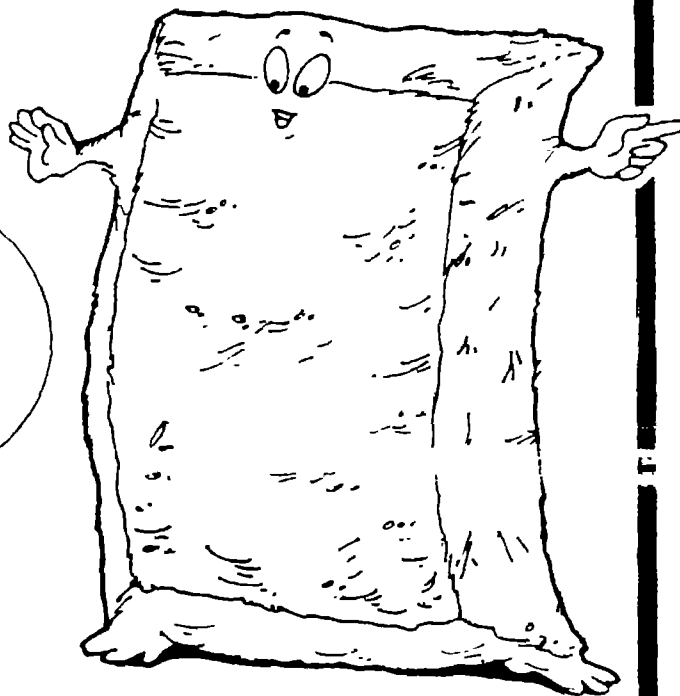
Step 8 (continuation):

6. What can be done with organic wastes like, vegetable and fruit remaining? (scene 13 to 17).
7. Have you ever observed how these organic waste items decompose?
8. Do you understand how organic waste turns into soil?
(If they say "no", tell them that they will learn about it later from the lesson on composting.)
9. The flies seem to be happy with decomposing waste around. What does that mean for our health?





*Can you please explain
it to us.*



*Don't worry!
You'll find out in
the next chapter.*

Scene - 17

Step 9

Read out aloud Scenes 18 and 19, asking the participants to look at the pictures and text carefully.

Step 10

Discuss the following questions:

1. The waste container shown in scene 18, seems almost empty. What could be the reason ? (scene 10 - 17)
2. Does the municipal staff need to come often to collect the waste? (scene 18)
3. By producing less waste and disposing the waste properly can we save municipal money? How? (scene 19).
4. What other public welfare services could be delivered if money is saved through responsible waste handling.

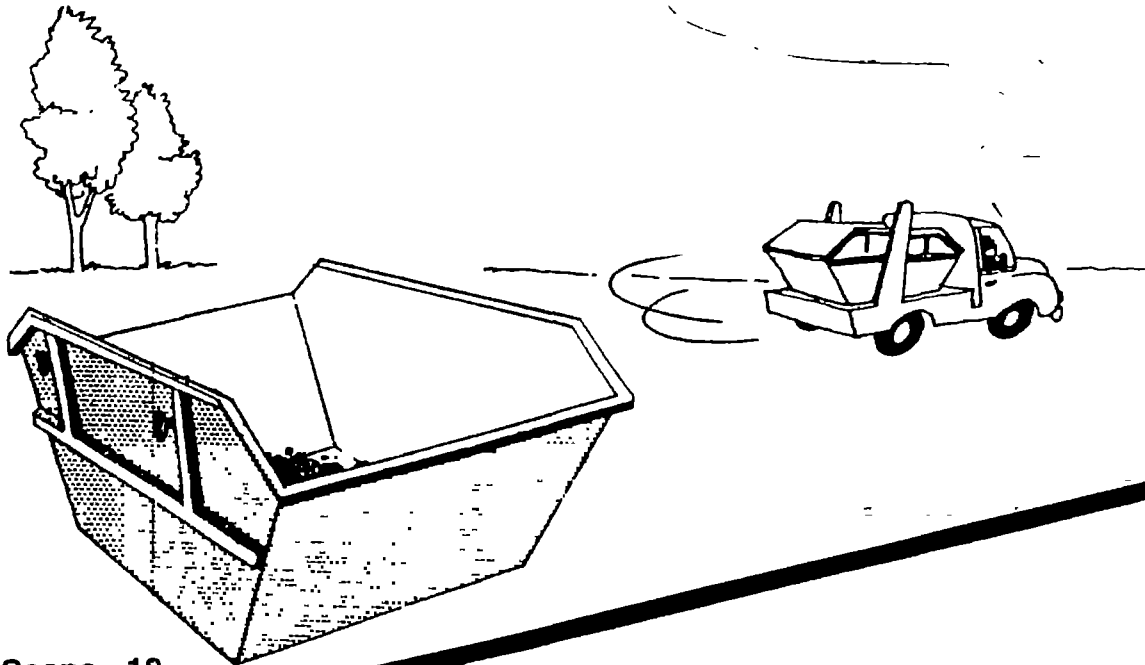
Step 11

Discuss on the following questions:

1. What can be done by men, women and children to reduce the waste production in the neighbourhood?
2. What are the advantages of reducing waste?

The waste pile is now very small, the place is clean and the container is nearly empty.

How nice. Now I don't have to come so often.



Scene - 18

.. and neither do I. This way the Municipality spends less money for cleaning up the city and can spend it on planting parks, establishing health posts and on all sorts of other good plans for our community.



Scene - 19

Step 12

Summarize to day's session by saying the following:

1. You have learnt from the lesson that different types of leftovers are produced at our homes such as, vegetable and fruits remaining, paper, plastics, glasses, tin cans etc.
2. Dumping waste into the river or carelessly on land as well as burning the waste produce health and environmental risks.
3. Waste can be categorized into two Those which rot (organic) and those which do not rot (inorganic).
4. Household wastes can be reused/recycled/composted and even sold. We realize that most leftovers which we throw away as waste in fact are valuable resources
5. By reuse/ recycling/composting we can save municipal expenses which can be used for many good purposes.
6. In order to reuse/ recycle/ make compost or even to sell the waste, we will have to collect organic and inorganic separately

Step 13:Home Assignment for the participants

- a) Separate the household waste into organic and inorganic, and the inorganic waste into reusable and non reusable.
- b) Find out which waste items are being reused or recycled in your area.
- c) Contact people in the neighbourhood who buy these resources.

Lesson learned from the first part of the story

There is no perfect place for the waste item to live in. For example, if they are :

- a) thrown in the street: people don't like them as they smell bad.
- b) dumped outside the city in a beautiful mountain: it spoils the surrounding.
- c) burnt: produced smoke, e.g. plastics stink people get headache .
- d) dumped in the river: the water get contaminated .

Lesson learned from the second part of the story

We can reduce waste by

- a) recycling old and used paper.
- b) making pencil holders and other decorative items out of cans and bottles.
- c) making compost from the waste produced from the kitchen.
- d) Making new things out of recycled plastic, glass etc.

By doing the things mentioned above, we not only reduce waste, we can also save some money and also earn some.

Session 5: Reducing Waste By Making Compost

Procedure of Making Compost

Part 1: (to be read before conducting the session)

Before giving the session, please study the following contents and objectives which should be achieved through the session.

1. Subject matter

There are several ways of reusing leftovers. Among them compost preparation is of high importance as the biggest percentage of our household waste (60-70%) consists of the organic waste from which compost can be prepared.

Procedures of making compost:

- A) Select an appropriate place for composting. It could be a pit, flat ground, a corner of your kitchen garden, neighbouring places. You can prepare compost even in a pot/container or on the terrace of your house.
- B) The vegetable and animal matter should be piled up and covered with dried leaves, soil or grass to avoid bad smells.
- C) If you cover the organic matter the compost pile won't smell, even if you prepare it in a container inside your house.
- D) For proper composting three things are required, i.e.
 - (1) moisture (2) heat (3) air
 - (1) Organic matter is moist. In case it dries proper moisture can be maintained by sprinkling water on the pile. In the rainy season the pile should be covered with a plastic. If the organic matter is wet it foulds.
 - (2) Heat is being produced naturally during the process of the decomposition of organic matter. If the pile is small, heat evaporates easily, especially in winter. Proper heat can be maintained by covering the pile with a mat, plastics, straws etc.

(3) To enter air into the pile we can turn it in every 6-7 days or use other methods of airing the organic matter. If we turn the pile in a way that the outer layer is inside and the inner layer outside it helps at the same time to destroy the eggs flies lay onto the pile. If we do not turn the pile before 9 days the eggs hatch and hygienic risks increase.

E) Compost will be ready in between 6-9 weeks

F) Compost should be mixed with the soil and placed around plants or seeds. It serves as an excellent fertilizer.

G) Advantages of using compost.

- a. improves the texture of the sandy ground
- b. increases the retention of water
- c. enriches the soil with micro-nutrients
- d. helps the growth of strong and big roots
- e. makes heavy soil lighter
- f. serves as a supplement to a chemical fertilizer or even eliminates the need for them altogether and
- g. help us to control our habits of dumping waste everywhere.

2. Objectives of the session

This session intends to convey the aforesaid information to the participants with the help of the lesson "Procedure of making compost" included in the book "My Clean and Waste Free Neighbourhood" (page 32 to 38). After the session the participants should be able to:

- a. explain compost preparation as one of the ways of reducing the waste production;
- b. name the organic leftovers from which compost can be prepared
- c. describe the procedures of making compost
- d. list the advantages of using compost
- e. start to produce compost by following the systematic steps of compost preparation
- f. be willing to use compost manure at home or in the neighbourhood

3. Material required for conducting this session

- Book : 'My Clean and Waste free Neighbourhood'
- Lesson: 'Procedure of Making Compost'
- Sample of vegetable and fruit peels
- This Guide Book
- Compost (sample) and poster

4. Necessary preparation for the session

Read the lesson "Procedure of making compost" a day before conducting the class and become familiar with the contents of the lesson and the method to conduct this session

Part 2 : Steps to be taken by the facilitator while conducting the session

Step 1

Distribute the book 'My Clean and Waste Free Neighbourhood' to the participants. Declare today's session "Reducing waste by composting", which is dealt in the chapter: "Procedure of making compost" (page 32-46).

Step 2

Start the session by asking the participants the following general questions:

- (1) Give ideas on how to reduce the waste production in our household?
- (2) Do you know what compost is?
- (3) Have you already prepared compost?

Step 3

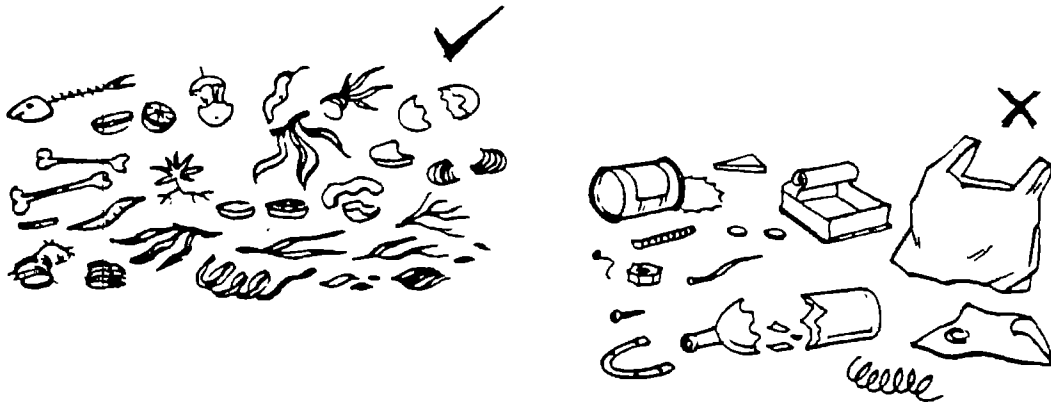
After discussing over the above questions ask participants to look at page 32, the lesson on 'Procedure of making compost' of the book 'My clean and waste Free Neighbourhood'. Request 2 participants to read out (if they can) one page each from page 32 to 33 of the book. If they cannot read the facilitator should help. For example:

Participant No. 1 - page 32	scene 1 & 2
Participant No. 2 - page 33	scene 3 & 4

Ask the participants to look at the pictures and text carefully (as they are being read out)

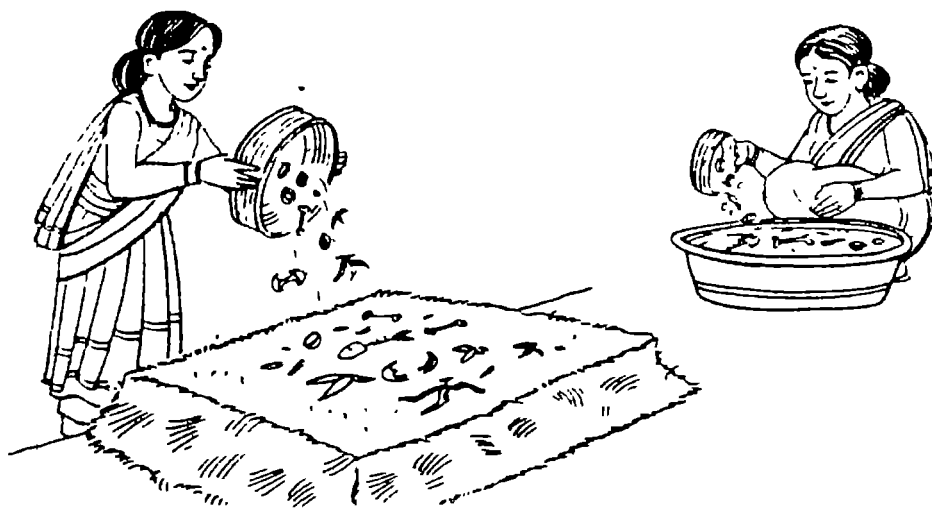
Procedure of Making Compost

Reducing waste by making compost



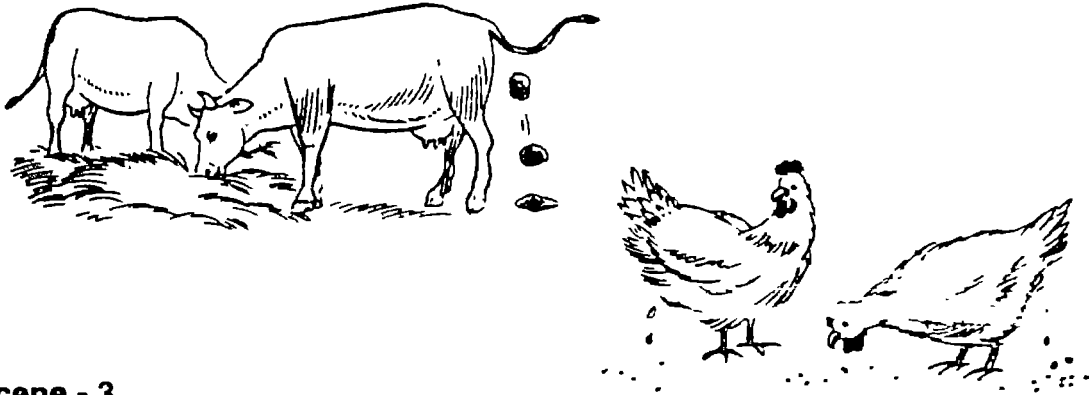
Scene - 1

We can make compost from the decomposing leftovers ourselves. First of all: collect all the leftovers from your kitchen like orange peel, egg shells, apple cores, chicken bones, vegetable leftovers, and anything organic.



Scene - 2

Put them in the corner of your garden or in a compost container if you don't have enough space.

**Scene - 3**

Ask around in your neighborhood, if they have cows or chicken, because the manure from these animals is excellent for your compost.

**Scene - 4**

Mixing everything together you will make a rich fertilizer. When you have more kitchen leftovers put them on top of your pile and cover them again with more dry leaves and soil.

Step 4

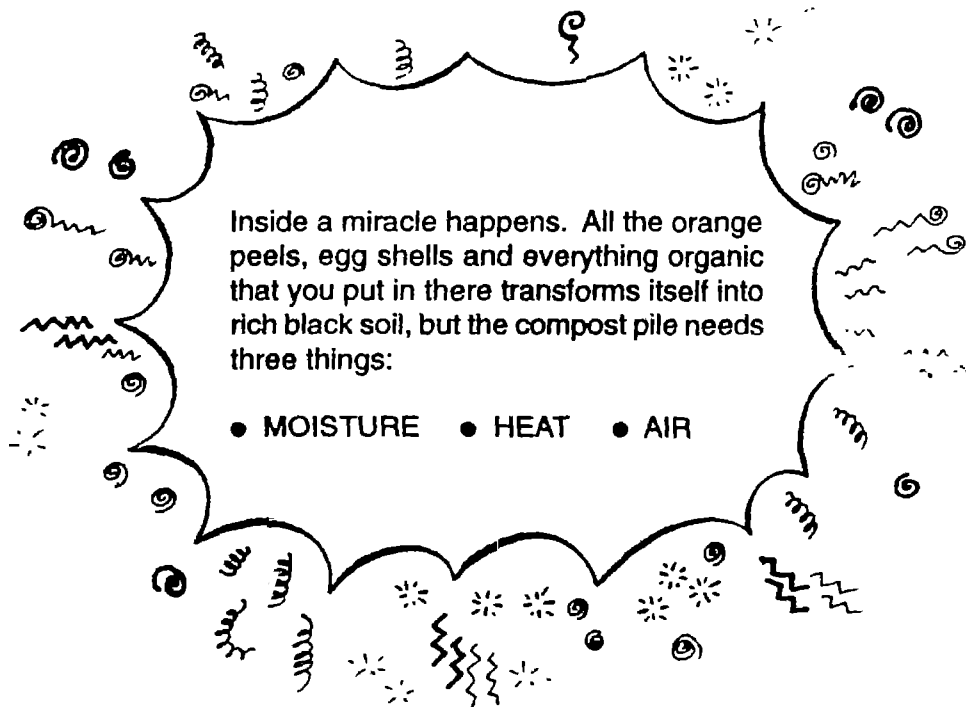
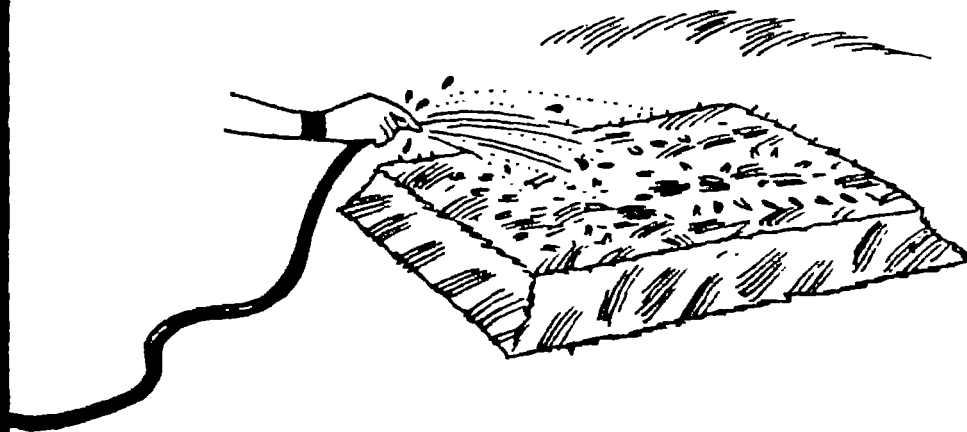
After reading the Scenes 1 - 4, discuss with the participants the following questions:

1. What are the leftovers which can be used for compost preparation? Give examples. (scene 2).
2. Which leftovers should not be used for composting? Why? (scene 1)
3. Why should we mix animal manure in the compost? (scene 3)
4. After piling up the leftovers for composting why is it desirable to cover it with dry leaves or soil?(scene 4)

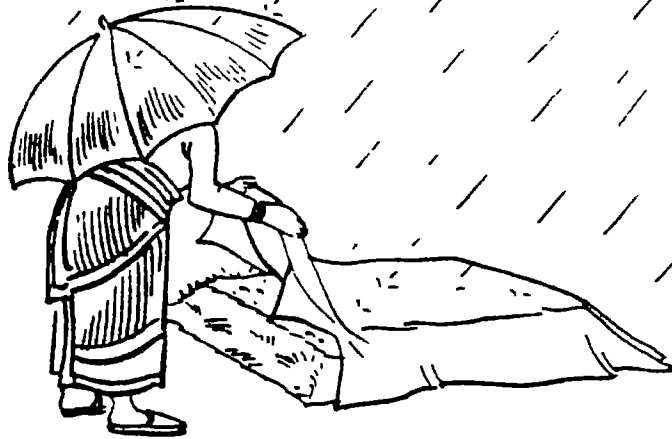
Step 5

Three other participants continue to read out one page each from page 34 to 36 of the book. For example:

- Participant No. 3 - page 34 (scene 5 & 6)
- Participant No. 4 - page 35 (scene 7 & 8)
- Participant No. 5 - page 36 (scene 9 & 10)

**Scene - 5****Scene - 6**

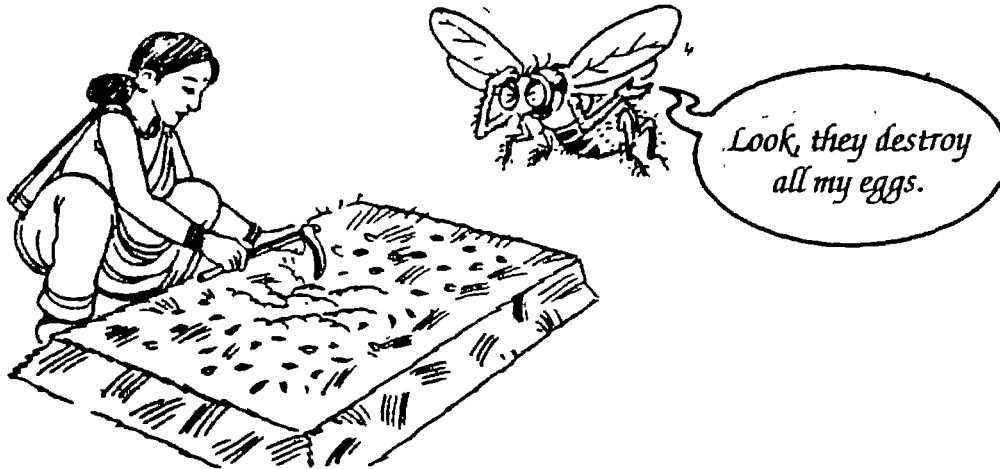
The vegetable leftovers already contain moisture. Only in the dry season the pile gets very dry and we have to sprinkle a little water onto the pile.

**Scene - 7**

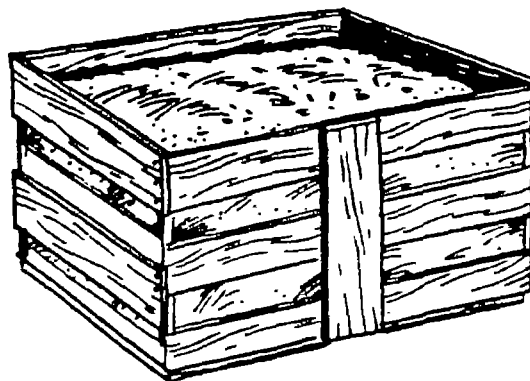
With too much moisture the organic leftovers foul, but do not decompose. They stink. In the rainy season we should protect the compost pile from too much water, placing it either under the roof or covering it with a plastic on top.

**Scene - 8**

When leftovers transform into soil heat is being produced by itself. This heat is needed so that organic leftovers transform into soil. The heat destroys all the germs. The compost pile should not be too small, so the heat does not evaporate. In winter the pile should be covered with a mat.

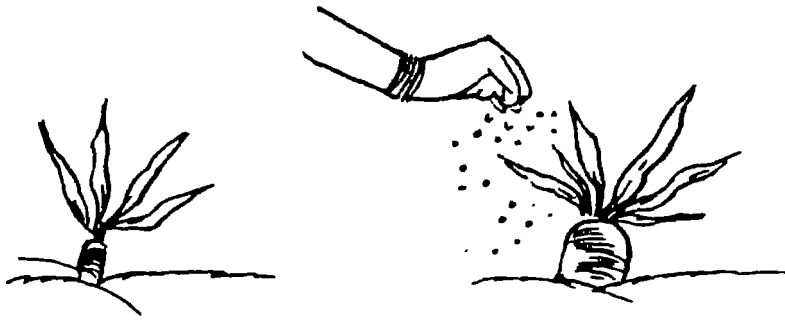
**Scene - 9**

The transformation process from waste to manure requires also air. The compost pile should be turned every 5 to 7 days in a way that the outer layer is placed inside of the new pile. Being placed on the outer layer of the pile it was too cool to decompose and turn into soil. Inside the pile the heat is protected and the organic leftovers also transform into soil. At the same time all germs and the fly eggs laid onto the pile will get destroyed.

**Scene - 10**

**Scene - 11**

We will give back to the earth the leftovers of the food which it has given to us.

**Scene - 12**

Use of compost manure helps the growth of strong and big roots.

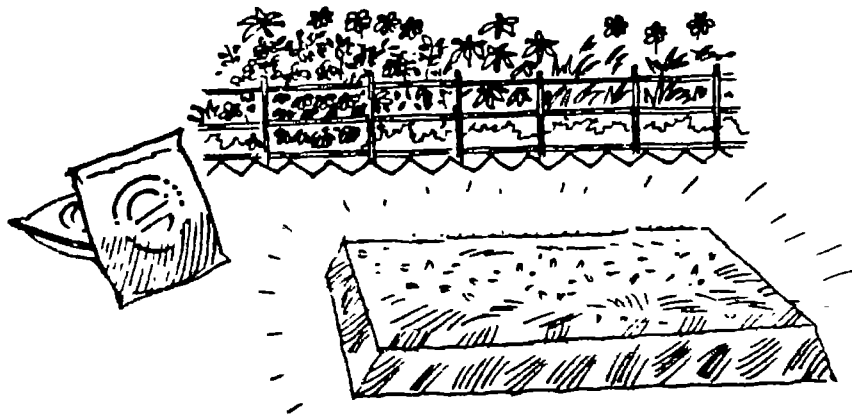
Step 6

After reading out scene 5 to 10, ask and discuss on the following questions:

1. What are the three important things needed for preparing compost? (scene 5)
2. What should we do if compost pile is dry? (scene 6)
3. Why should we cover the pile in rainy season? (scene 7)
4. What should we do to maintain the heat in the pile, in winter? (scene 8)
5. What does the heat generated in the pile do to the germs existing there? (scene 8)
6. Why should we need to turn the pile every 5 - 7 days? (scene 9)
7. How should we turn the pile? (scene 9)
8. The box shown in scene 10 is used for composting, why are there gabs between the wooden planks?
9. How can we prepare compost in a container at our home?

Step 7

Read out the scenes 11 (page 37 to 38) asking the participants to look the pictures and text carefully.



Scene - 13

Compost manure serves as a supplement to chemical fertilizer or even eliminates the need for them altogether.

Lessons learned from the story

- a Organic leftover can be recycled by preparing compost and this way we can reduce volume of waste to be disposed of.
- b There are several steps of compost preparation.
- c Compost can replace the chemical fertilizer, the later is costly.
- d By preparing compost we can reduce waste and keep our surroundings clean.

Step 8

After reading the scenes 11, 12 and 13, discuss the following question:

- What are the advantages of preparing compost (scene 11 to 13).

Step 9

Summarize today's session by explaining the following points what they learnt from the session.

- a) Organic waste are used to prepare compost.
- b) Composting help us to reduce our household waste by 60-70%.
- c) Compost can be prepared in the garden, terrace and even in a bucket.
- d) Compost can be used by mixing it with soil and placed around plants or seeds.

Step 10**Home Assignment for the participants**

- a) Ask participants to prepare compost in their home and report to the facilitator and the participants in one of the following sessions.
- b) Bring samples of used paper and in organic waste for the next session.

If possible try to:

- Visit the house of a participant who has prepared compost (even if it is done in a traditional manner) and explain how it differs from the way described in the book "My clean and waste free neighbourhood"
- Demonstrate how to prepare compost in the house of one of the participant who is willing and has space to do so.

Session 6: Reducing waste by recycling and reusing leftovers (Theory)

The Story of Paper

Part 1: (to be read before conducting the session)

Before giving the session, please study the following contents and objectives which should be achieved through the session.

1. Subject matter

Reuse and recycling of leftovers

A) Reuse:

Some waste items can be reused and not necessarily be thrown away. For example, bottles, tin cans, plastic bags can be cleaned, some of them can be decorated with colors or colored paper. Then they can be used again by us or others.

We can make different items from the used paper like new paper, paper plates, masks, toys like figures fruits, houses, flowers and many other decorative items. Plastic bags can be used as fillings for pillows, cushions or woven into mats or ropes. We can generate income by selling these items to others.

B) Recycle:

Many waste items can be recycled, such as glass, metal, cardboard, certain plastic objects, bottles, bags. Industrially they are dissolved and formed into a new objects. They can be used and sold again. Paper, for example, can be recycled industrially and then used again as writing paper. We can recycle paper manually and use them for greeting cards, boards or making figures and objects.

By using recycled paper we not only reduce the amount of waste to a considerable extent, but also save natural resources, such as:

- a) Trees or other plants
- b) Energy
- c) Large quantities of water

We should rather see the value of waste as a resource material and make new paper items out of the used paper.

Advantages of recycling and reusing leftovers are as follows:

- a) Reduces the waste which has to be collected and filled into a landfill site.
- b) Generates income for a considerable number of people
- c) Provides resource material which is very limited in Nepal.

2. **Objectives of the session:** At the end of the session the participants will be able to:

- a) explain the reason for reusing and recycling leftovers.
- b) name the leftovers which can be recycled industrially and manually.
- c) list the advantages of recycling leftovers
- d) name the advantages of recycling paper
- e) describe the procedure of recycling paper
- f) explain the procedures of making masks and other paper items
- g) be aware of the possibility to recycle paper by one self or handing it over to others in order to be recycled industrially.

3. **Materials required to conduct this session:**

- Book: 'My Clean and Waste Free Neighbourhood'
- Story 'The Story of Paper'
- This Guide Book

4. **Necessary preparation for the session**

Read 'The Story of Paper' of the book 'My Clean and Waste Free Neighbourhood' one day before conducting the class and become familiar with the contents of the lesson and the method to conduct this session.

Part 2 (to be followed during the session)**Step 1**

Request the participants to recall and tell, what they have learnt in previous sessions. The participants should at least recall and tell the following topics:

- a) indiscriminate throwing/dumping of waste brings may harm us.
- b) there are two types of waste: organic and inorganic
- c) nearly all waste materials are leftovers which have got some value
- d) we have to collect the waste separately, so it could be reused, given away or sold to others.
- e) we can reduce large volume of waste by composting alone.

Step 2

Declare today's session 'Reducing waste by recycling and reusing leftovers', which will be discussed with the help of 'The Story of Paper' page 39 - 46 of the book 'My clean and Waste Free Neighbourhood'.

Step 3

Explain what is meant by reusing and recycling of leftovers (give examples of household leftovers).

Step 4

Distribute the books to the participants and ask them to turn to page 39, of the book. Read out aloud scene 1 to 5 asking the participants to look carefully at the pictures and the given text on it.

Step 5

Discuss the following questions:

1. What problem is the girl facing (scene 1)
2. Why is the girl in the picture reluctant to burn or put the paper into the container (scene 1)
3. Does someone in your family burn the waste paper? If yes, is it good to burn the paper? Why?

The Story of Paper

Recycling Paper

Scene - 1

What should I do with all this waste paper? If we burn it we have a lot of smoke into the air. If we put it into the garbage container, it will fill up very soon and probably overflow.

Let us think what can be done. After all paper is made from tree.



No, stop! Not so much. This paper was made in a factory, then bleached and printed, it is not as natural as other vegetable leftovers. Only a small amount of paper can be absorbed in a compost pile.

All vegetable matter including plants can be composted. Paper is made out of plants, so we can put it onto the compost pile, can't we.

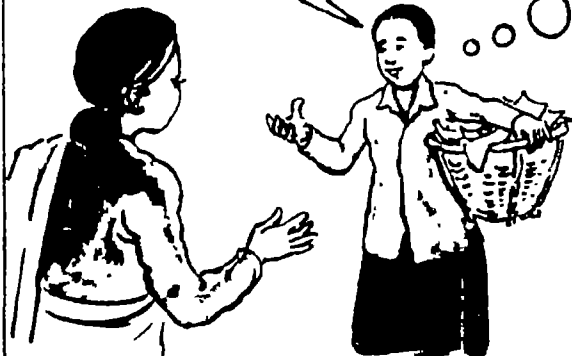


Scene - 2

Most paper is made out of trees, some other paper out of bushes.

Scene - 3

You mean big beautiful trees have to be chopped just to make paper. Then we scribble something onto it or just read the printed paper in a magazine once before throwing it onto the garbage? Let me tell you what the teacher told me about the use of trees.



Step 5 (continuation)

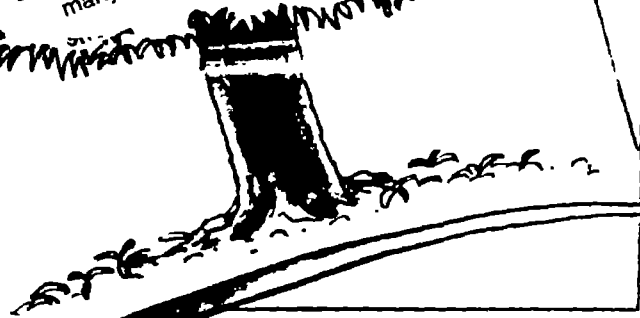
4. Why did the girl intend to put the printed paper in a compost pile ? (scene 2).
5. What was the reaction of the women, why did she prevent the girl from putting the waste paper on the waste pile? (scene 2).
6. Why did the girl remember the lesson taught to her by her teacher about the tree? (scene 3).
7. What are the advantages of saving the trees (scene 4).
8. Do you have trees in your garden or in the neighbourhood? Do you want them to be cut? Why? Why not?

Scene - 4

There are so many reasons why we should look after trees. I'll show you in this book, why trees are important.



- They look very beautiful
- They produce oxygen which we need for breathing
- They clean the air
- They take the stale air and transform it into oxygen
- They keep the soil humid and clean the ground water
- They prevent erosion to the earth caused by Sunday, wind and rain.
- They provide shadow to the passer-by in the hot season.
- Trees and the forests are the houses for many animals and plants.



Did you know that only one mature tree produces enough oxygen so that I and nine of my friends can breathe.



Scene - 5

Step 6

Read out scene 6 - 14 of the book. Ask the participants to look at the scene carefully as they are read out scenes 6 to 15 asking the participants to look carefully in the given pictures.

Step 7

After reading scenes 6 to 14, discuss the following questions:

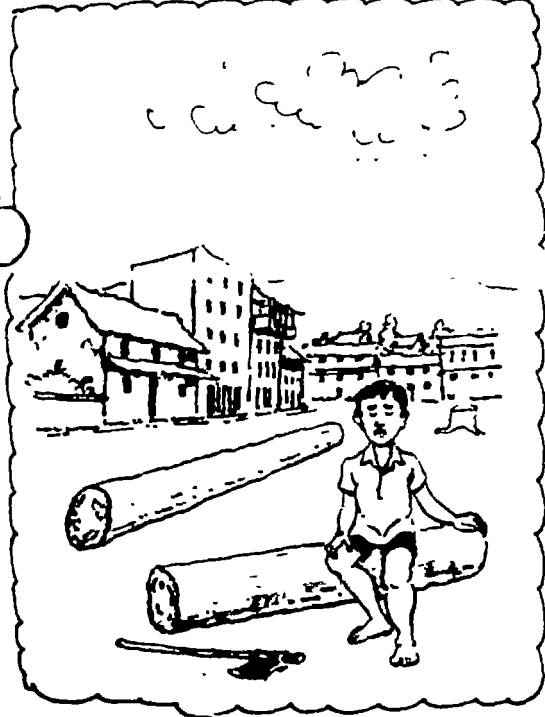
1. Give some reasons why trees should be preserved. (scene 4-6)
2. What are the required materials for producing a paper? (scene 7 and 8).
3. Do you think it is appropriate to use a lot of water, electricity and wood to produce paper? Why? Why not?

I cannot understand why trees have to be chopped off for producing paper. Let us ask my teacher.

You see we really do need our trees alive!

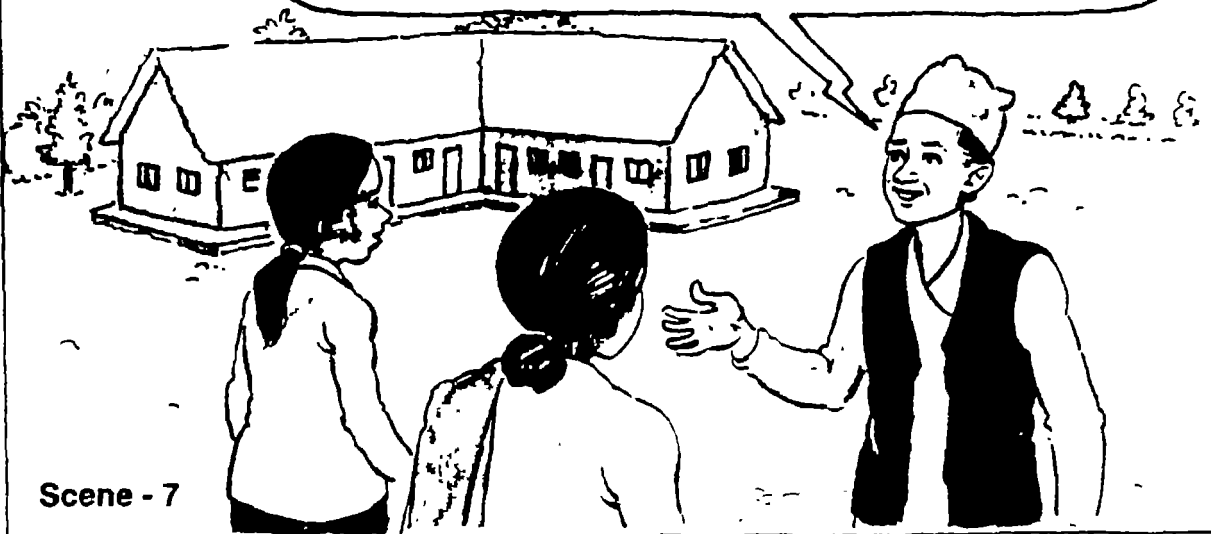


Scene - 6

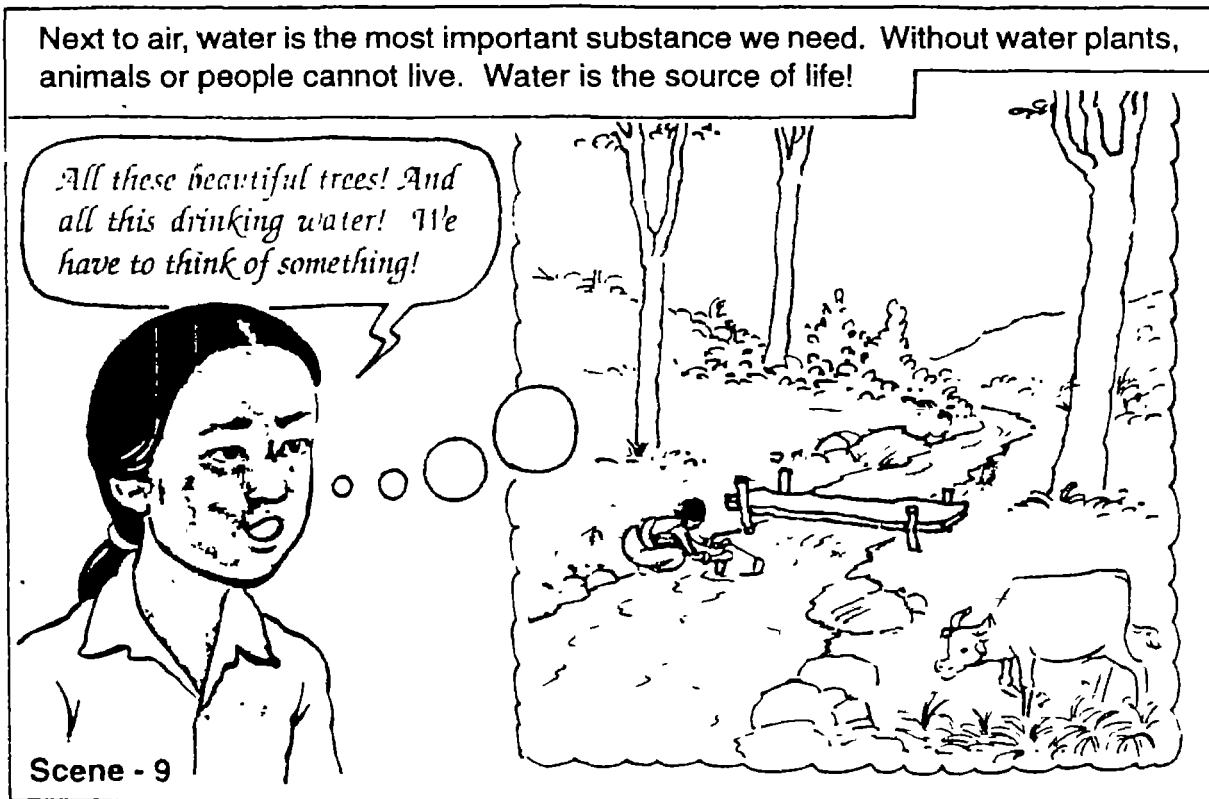
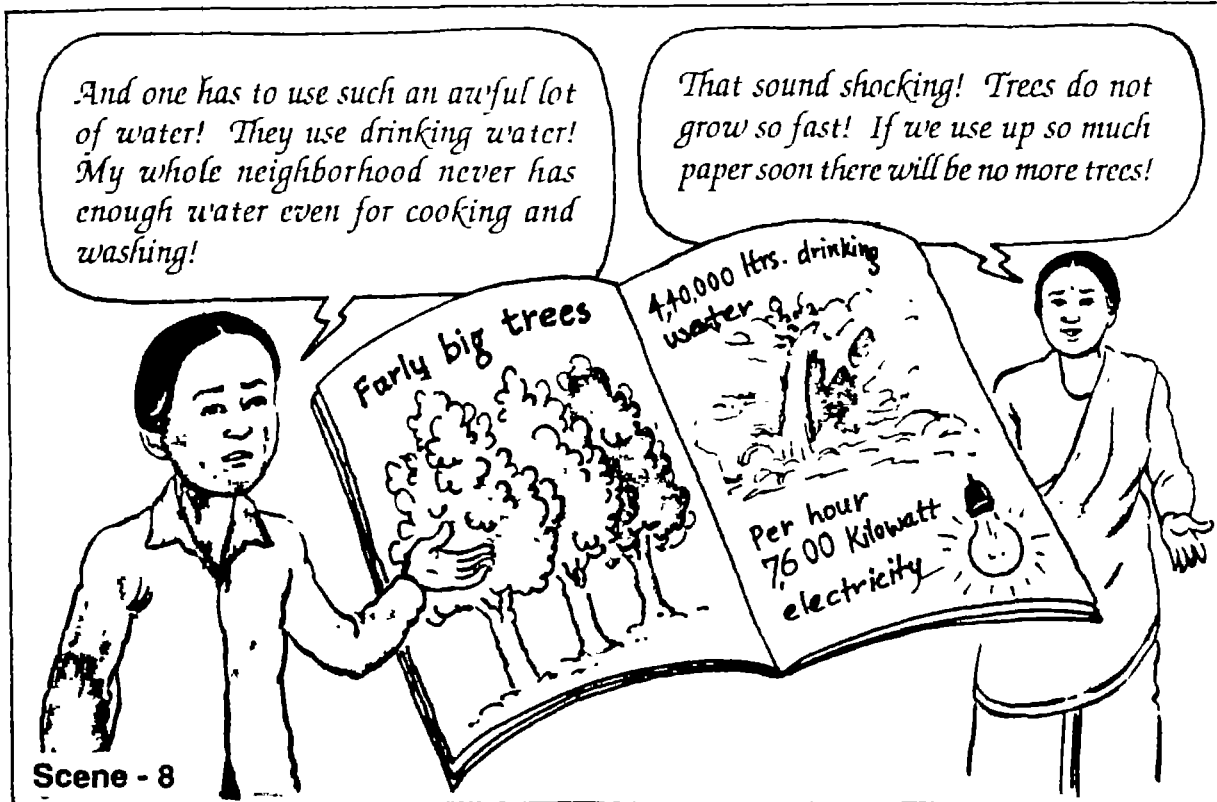


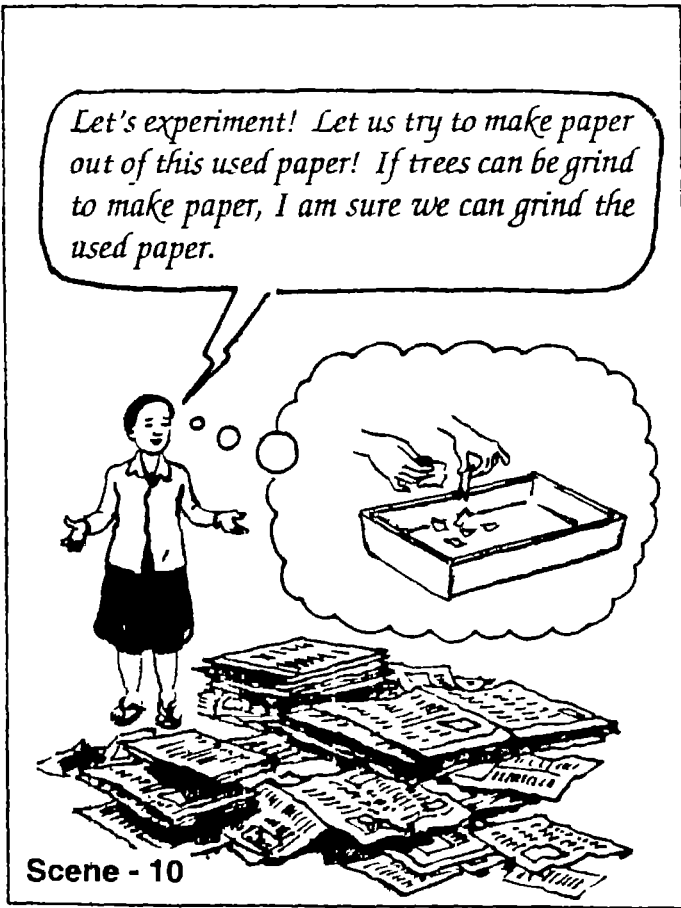
The girl tells the teacher her worries and asks her how paper is made.

Most paper is made out of trees, that's right. They chop the tree in little parts, grind them in big machines, adding big quantities of water. I'll show you in a book, how much wood, water and energy are required to make paper.



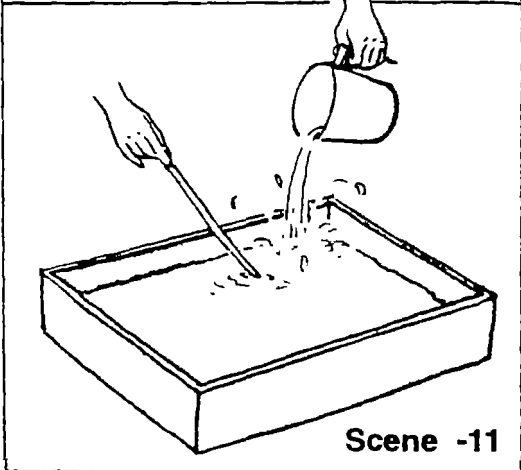
Scene - 7



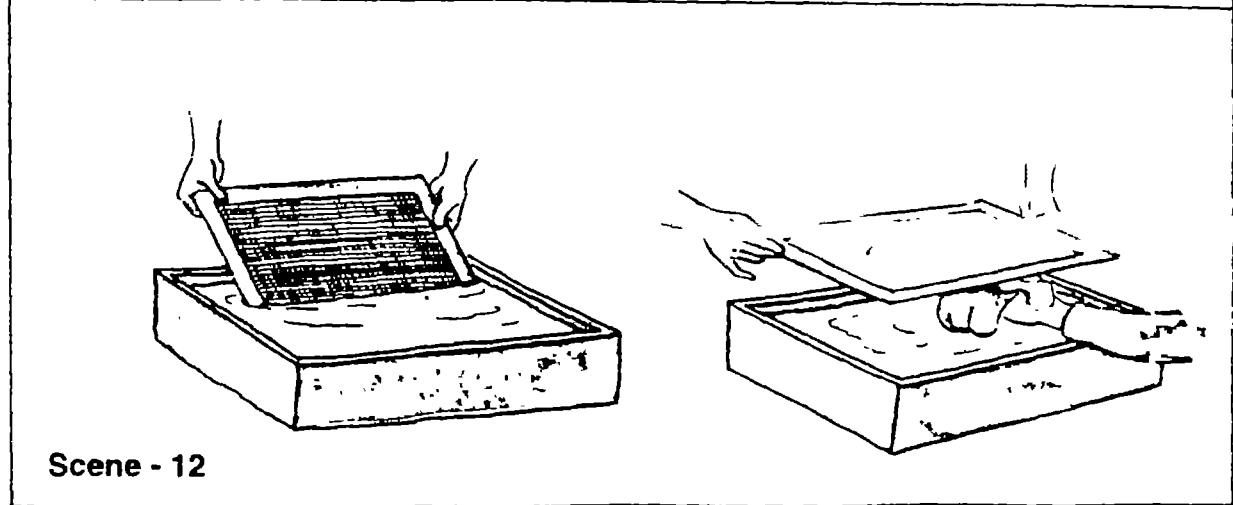


The girl tears up paper into tiny pieces, puts them into some water and lets them soak overnight, so they become soft. Next morning she grinds the pieces of paper with both her hands.

As guided by the teacher the girl pours the paper mixture into a bigger bowl and adds water, stirring the thick paste into the water.



The girl takes a screen and pulls it straight or holds it with a frame. Then she places it into the bowl and lifts it up. The new sheet of paper is lying on the screen. Her mother is drying the bottom side of the screen with a cloth.



Step 7 (continuation)

4. How do you recycle paper manually? (scene 10 - 12)
5. What do you need for recycling paper? (scenes 10 and 11)
6. How do you insert the frame into the tray? And how do you take it out?
Please describe (scene 12).
7. Is it true that by recycling used paper, we can save trees, water and
electricity? How? Please explain (scenes 13 and 14).
8. Can you also prepare paper at your home? Explain how

When the paper is dry she holds the paper up.

Well done! If the paper is made in a factory it would be as fine as any other paper. And just think, how much we save: Recycling 1 ton of paper, we do not need any trees or plants, only used paper, less than 1800 liter water and 300 kilowatts per hour.

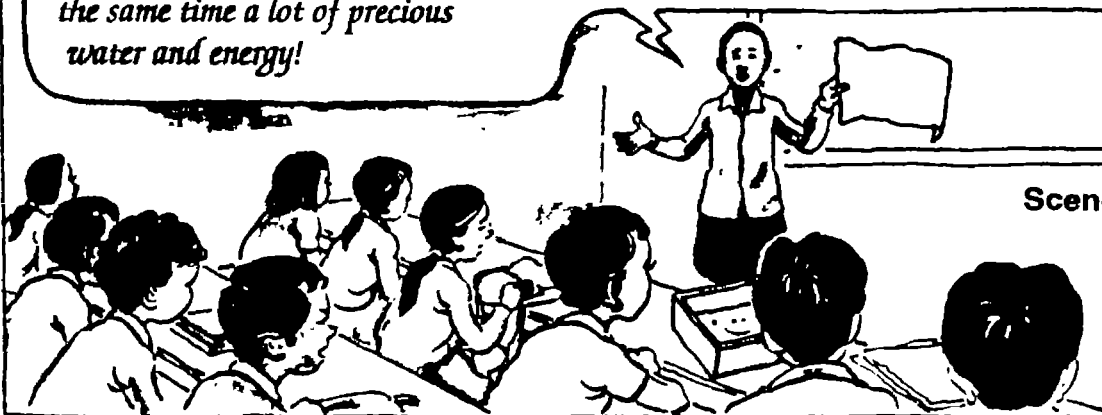
Look, this is my paper. I made it out of used paper.

From now on, let's not throw the used paper away!



Scene - 13

We can recycle the same paper more than once, in fact 6 times, we can make new paper out of used paper just using a little water. This way we save our trees and at the same time a lot of precious water and energy!



Scene - 14

Step 8

Read out the scene 15 to 19. Ask the participants to look at the scene as they are read out.

Step 9

After reading out the scenes ask the following questions to stimulate discussion:

1. What else can you do with the paper pulp besides making a new paper? (scene 15).
2. How a mask can be prepared out of paper pulp? (scene 16 and 17)
3. Have you seen decorated masks in the shops?
4. Can we also prepare masks at your home and earn money by selling them? Why?

Step 10

Summarize today's session:

1. You have learnt the meaning of recycling leftovers which means to dissolve the used objects (leftovers) to produce the new items, such as glass, metal, certain plastic bags and paper etc.
2. Used paper can be recycled and prepare new paper, paper items like masks, plates, toys, greeting cards etc. manually at our home.
3. Advantages of recycling leftovers such as:
 - a) reduces the waste which has to be collected and fill into a landfill site.
 - b) generate income for a considerable number of people.
 - c) provides resource materials
4. Producing new paper needs lot of trees, water and electricity while recycling of paper needs less water, electricity and no trees at all. By recycling used paper, we can save lot of trees.
5. Procedures of recycling paper manually by tearing, soaking and grinding the paper and mixing water in it. Preparing new paper with the help of a frame. Preparing masks out of paper pulp.

Some paper paste was left on the tray.

I'll use the rest of the pulp and form a mask or a statue.

Scene - 15



She drains of the water and builds a mask out of the nearly hard substance.



Scene - 16

The paper mask has to dry, so it becomes hard. Then it will be ready to be colored.



Scene - 17



They are beautiful! I would like to buy some for my friends back home. How much are they?

Scene - 18



I can make masks like that too, and any other items like plates, dolls and decorative items.

Scene - 19

Step 11:Home assignment for the participants:

- a) Ask the participants to read (if possible) the instructions, again, on how to prepare mask on page 46, scene 15 - 17 of the story of paper
- b) Ask them to read and understand the instructions on how to recycle paper, given on the page 48 of 'My Clean and Waste Free Neighbourhood'.
- c) Ask participants to bring the following materials for the next session.
 1. paper pulp, made by soaking paper pieces and grind finely as far as possible.
 2. some pieces of cloth, which can absorb water
 3. old newspaper
 4. round shaped bottle
 5. colors to mix in the pulp
 6. some frames, which are used for straining the flour in our homes.
 7. The facilitator should also bring the materials like, trays, frames etc. and some samples of recycled paper, greeting cards, animal figures etc. prepared out of recycled paper; paper masks, different models, alphabets etc. for the demonstration in the next session.

Lesson learned from the story

- a) Paper is made out of trees/plants, using a large quantity of water and energy.
- b) Waste paper should not be added to the garbage pile.
- c) Waste paper should not be burnt.
- d) Waste paper should not be composted in a large quantity
- e) Waste paper can be recycled and used again 6 times.
- f) Factories can recycle the paper into new paper.
- g) Manually we can make objects out of used paper, such as masks, cardboard paper, notice board, paper plates , toys and other decorative items.



Session 7: Paper recycling
(practical exercise of making new paper out of used paper)

**Instructions on how to recycle Paper
and make masks**

Part 1: (to be read before conducting the session)

Before giving the session, please study the following contents and objectives which should be achieved through the session

1. Subject matter

The facilitator should study and practise the procedure of making paper before conducting this session.

Procedures of paper recycling:

1. Tear up the used paper (no tissues) into bits and pieces and soak them in the water overnight.
2. Grind the soaked paper between your hands and pour the mixture into a deep tray.
3. Mix the colour of your choice if you want to produce coloured paper.
4. For making thin paper you have to mix more water. If you want to produce thick paper add less water
5. Insert the frame vertically and place it on the bottom of the tray. Leave it there until the water becomes still; then slowly take out the screen horizontally.
6. Dry the screen from underneath. When it looks completely dry, turn the frame upside down over a pile of newspaper. Keep on drying the screen with a cloth till it becomes completely dry. If you lift the screen too early, the paper might crack.
7. When it is dry enough the paper will fall off by itself.
8. Put another pile of newspaper pile on top of it and press gently (you can use a bottle) till the moisture of the new paper soaks into the newspaper.

9. Pick it up carefully and hang or place it to dry.

10. Greeting card, files, folders etc could be produced from the recycled paper

One can use the waste paper also for making masks. Waste paper (torn into bits and pieces) soaked in the water, optional with rice glue, can be pasted on the back of a hollow mask model. Before pasting the paper the back surface of the mask should be painted with oil so that the paper does not stick on the mask making it difficult to take off. Pasting the paper can be continued till a desired thickness is reached. Let the mask dry in the shade.

Take off the prepared mask and paint as desired. Masks can be displayed at home for decoration or if possible sold to the handicraft shops. Similarly paper plates, bowls, etc. could be prepared by using models.

2. **Objectives of the session.** At the end of the session the participants will be able to:

- get a feeling for the value of leftovers, for example, waste paper
- become creative in finding new ways of using the waste paper instead of throwing it away
- develop an interest in producing decorative or useful items out of used paper
- explain the procedure of paper recycling, forming masks, plates etc.
- demonstrate stepwise how to recycle paper and prepare masks, plates etc.
- appreciate recycling leftovers as a way of reducing waste and preserving natural resources like water, trees and energy

3. **Materials required to conduct this session:**

- The book: "My Clean and Waste Free Neighborhood"
- The story: "Instructions on how to recycle paper and make mask"
- Used paper
- Used paper torn up into bits and pieces and soaked in the water overnight
- A tray
- Water
- Cloth for drying

- Possibly a frame, e.g. which is used for straining flower at our home
- Newspaper
- A big size empty bottle
- A model of a metal mask
- A model of metal or plastic plates, bowls etc.
- For the purpose of demonstration the facilitator could bring objects produced during the training workshop or by participants in former courses. Such objects could be cards, masks, fruits, statues, houses etc.

4. Necessary preparation for the session

Read the instructions a few days before conducting the class Practise making new paper and other items out of waste paper by following the instruction. Show the items that you have prepared to the participants.

Part 2 Steps to be taken by the facilitator while conducting the session.

Step 1

Declare today's topic by stating that participants will recycle paper themselves, prepare masks, plates from soaked paper, which they have brought from their homes.

Step 2

Ask the participants to collect all the materials they were asked to bring for today's session. Prepare the materials for the demonstration of paper recycling, forming of masks, paper plates, and models.

Step 3

Ask the participants to stand in a circle around you so that everyone can observe your demonstrations.

Step 4

Ask the participants to turn the page 48, 'Instructions for Recycling Paper' of the book 'My Clean and Waste Free Neighborhood'

Step 5

Display all the materials needed for the preparation of paper on the table or on the floor.

Step 6

Ask one of the participants to read the instruction step by step loudly from page 48 to 51

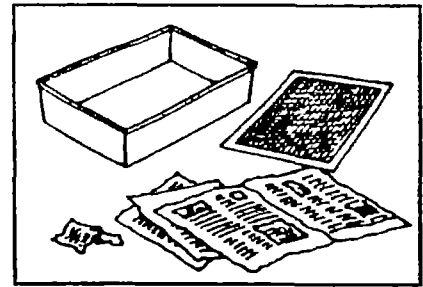
Instructions on how to recycle Paper and make Masks

A. Instructions on how to make paper

we throw away paper if it is only used once, but we can make new paper out of it and then use it again. The paper we make does not need trees, only a little water and it is not so difficult to prepare either. With the help of your teacher, you can make it by yourself in the classroom.

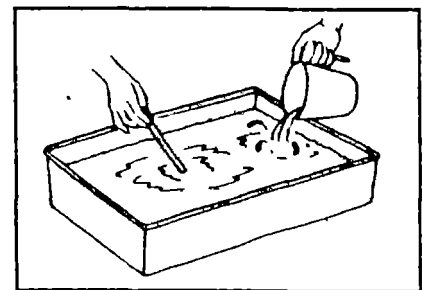
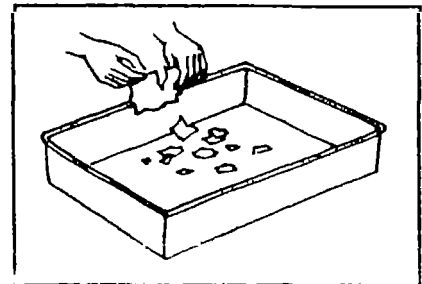
Materials required to make paper

1. Old and used paper
2. One bucket and one deep tray
3. Cloth which can absorb water
4. Newspaper or used paper which can absorb water
5. Frame with a screen
6. About a bucketful of water

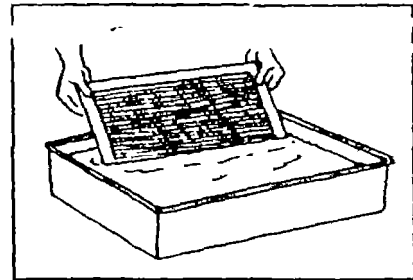


Procedure required to produce the paper

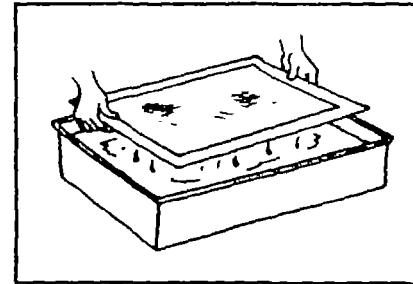
1. Tear the used paper into small pieces one day before you make your paper
2. Put it in the water to soak
3. Keep it overnight in the water
4. In the morning after it has been thoroughly soaked move it and mix it around and use your hands to grind it.
5. Pour some of the paper paste into the deep tray
6. Add a little water to make thick paper and more water to make thin paper.



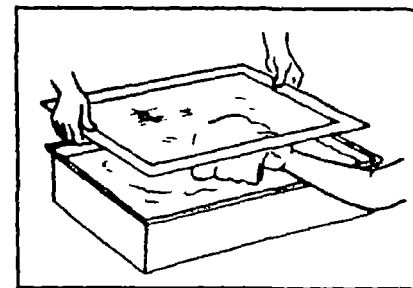
7. Now you move the frame along the side of the tray and place it on its bottom, holding onto it.



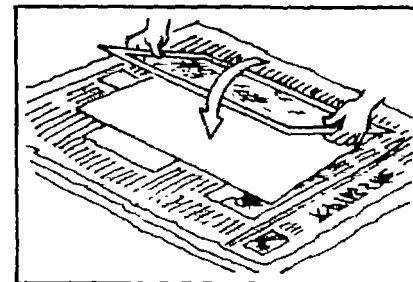
8. When the paper paste has settled take out the screen horizontally.



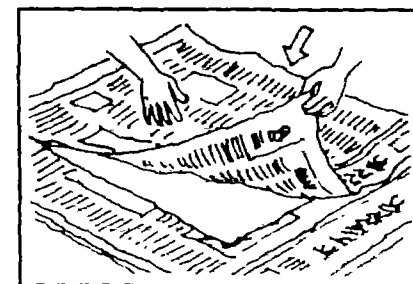
9. One of your friends should help you to dry the screen from underneath with a cloth.



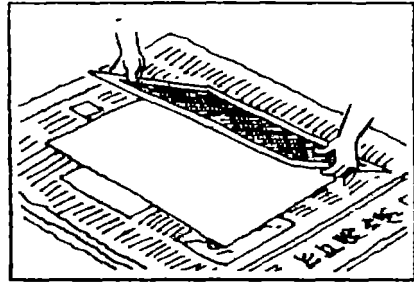
10. When it feels completely dry, turn the frame upside down over a pile of newspapers.



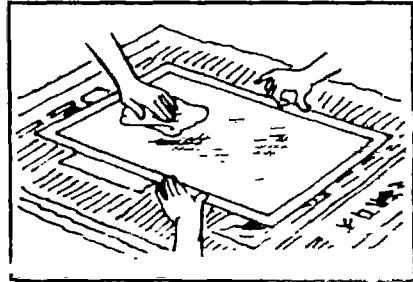
11. Your friend presses the frame against the paper, while you carefully press the screen with another piece of dry cloth, without forgetting the corners.



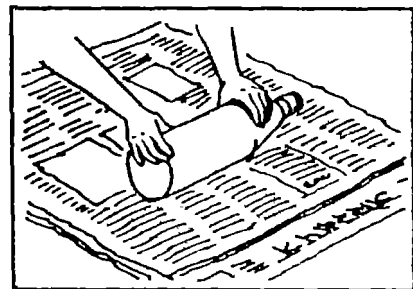
12. The paper will fall down onto the newspapers.



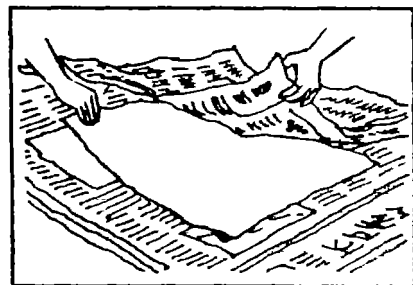
13. Put another pile of newspapers on top of it and press it gently.



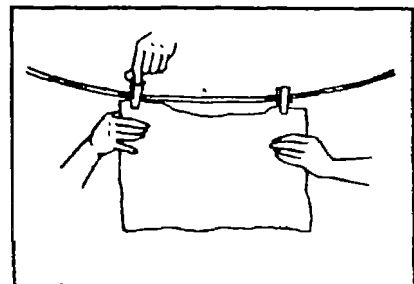
14. To strengthen the paper and to enable the newspapers to absorb all the water, put more weight on it by pressing it firmly with a bottle or by using your hands.



15. Take off the upper pile of newspapers and slowly lift off the paper.

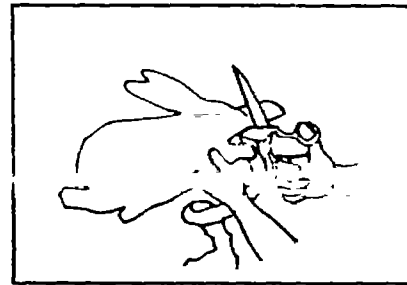
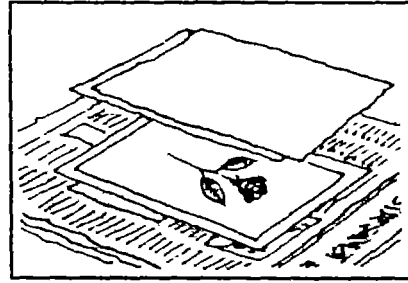


16. Carefully hand it to dry.



Additional Ideas

1. If you want to make colored paper, add color to the paste (see step 5). If you want to make red or yellow paper you can do so by using Abir (red powder) or turmeric.
2. If you want to make pattern such as a flower you can do so by putting dried flowers in between two pieces of paper while it is still wet before pressing it (see step 13 before pressing it).
3. You can cut and use the paper any way you like.
4. The paper you make can be used in various ways such as for playing, decorating rooms, greeting cards, etc.



Lesson learned

- a Saving resources through paper recycling.
- b Material required to make new paper
- c Step-by-step procedures of making paper at home.
- d Coloring techniques and patterns for recycled paper.

Step 7

Facilitator should demonstrate each step simultaneously as they are being read out.

Step 8

Display some of the items which you have prepared from recycled paper previously i.e. greeting cards, plan paper sheet - if possible

Step 9

Ask the following questions and stimulate the discussion among the participants.

- Why is it necessary to make paper pulp and dilute it with water?
- Describe the procedures of making new paper from diluted paper pulp.

Step 10

Ask the participants to turn the page 52 of the book 'My Clean and Waste Free Neighborhood'. Read the title "How to make mask from old paper and say that the participants are going to prepare masks out of paper pulps.

Step 11

Display all the materials needed to prepare a mask.

Step 12

Ask one of the participants to read the instruction step by step from page 52 to 53. Demonstrate each of the step simultaneously as they are being read out.

Step 13

Display prepared mask, paper plates, models of fruits, and alphabets made from the paper to the participants and explain the procedures of preparing it.

B. Instructions on how to make paper mask.

We can make masks out of used paper. By this we can help reduce waste and demonstrate the economic value of leftovers.

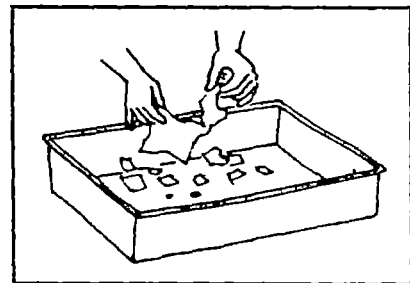
Materials required to make paper mask



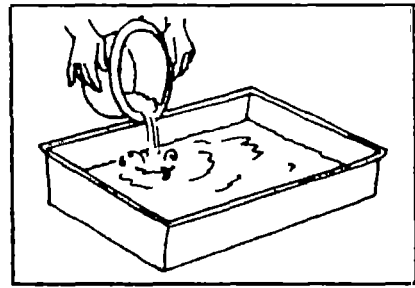
1. Old and used paper.
2. One tray and water preferably mixed with rice glue (but it is also possible without glue)
3. Frame or models of hollow metal or hard plastic mask.
4. Paints of different colors.
5. Handmade painting brush

Procedures of mask making

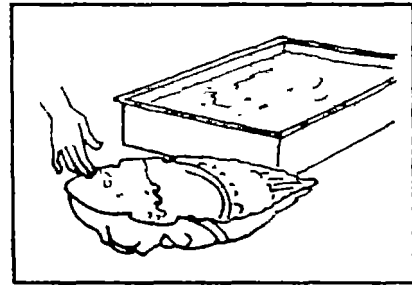
1. Tear the used paper into small pieces.



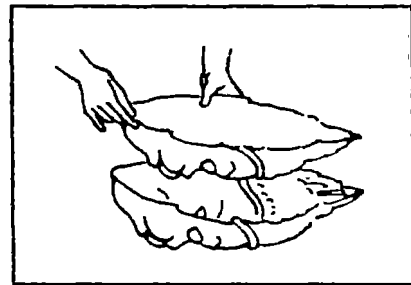
- Put the paper in the water with small amount of rice glue.



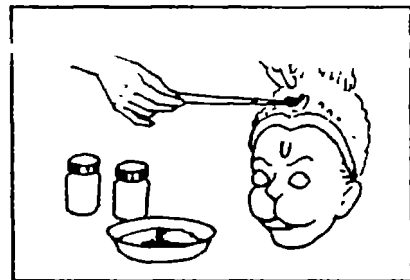
- Start pasting the soaked paper on the hollow back of the model mask.
- Continue pasting till a desired thickness reached.



- Let the paper dry on the shade
- Take off the mask from the model mask.



- Paint on the mask with different colors as required.



Lesson learned

- Materials required to make paper masks.
- Procedure of making paper masks.

Step 14

Have the participants prepare different objects from used paper. Divide the participants into 3 groups and assign the following works

Group A: Recycle paper with a screen

Group B: Making masks

Group C: Making paper plates, alphabets and fruits models, houses, etc.

Step 15

Go to each of the groups and guide and suggest if needed. Make sure that every one of the groups should participate actively in the assigned tasks.

Step 16

After completion of one assignment, rotate the group to other assignments so that each of the group could get opportunity to work on all the three assignments.

Step 17

After completion of all the tasks by all the three groups, ask them to show the things they have prepared and let them express their experiences. Provide your ideas for preparing other items out of paper pulps.

Step 18

Ask the following questions and stimulate discussion among the participants.

- Who else could be interested to recycle paper?
- In what ways can you use the waste paper? Explain.
- Why should waste paper rather be treated as resource material than as waste?
- If you cannot make or do not want to make a recycled paper or other items out of old papers, what can you do with them without throwing them away?

Step 19

Summarize today's session.

1. You've learnt from today's session that old(used) paper can be recycled by preparing new papers masks and other objects of your interest.
2. Old paper can also be used to prepare models of fruits, alphabets giving shape to the paper pulp, as orange, mangoes etc. by hand and drying it in the sun and coloring it.
3. The purpose of to-day's practical session is to get a feeling for the value of waste paper as resource material and to become creative of how it can be used.
4. If there is no time or no interest at all to recycle paper or to make different items out of it or things from other leftovers, we can always give them away to those who can use them

Step 20**Home Assignment for the participants:**

1. Demonstrate how to recycle paper, prepare masks, paper plates, alphabets etc. to your family members and neighbors.
2. Prepare some of the items learnt to-day and show them to your friends, when we meet after one month or so.
3. Bring used tin cans, used paper, rice glue colors and used plastic bags for the next session.
4. The facilitator should also prepare above materials and colored tin cans, paper masks, plates and cushions, pillows etc. prepared out of used plastic bags as well.

Session 8: Reuse of inorganic leftovers (manually))**Recycling/Reusing Leftovers**

A Practical exercise of making paper plates, pencil holder, flower vase

Part 1: (to be read before conducting the session)

Before giving the session, please study the following contents and objectives which should be achieved through the session.

1. **Subject matter**

Reusing: All inorganic leftovers should not be discarded as waste. Leftovers like bottles, tin cans and plastic bags can be cleaned, decorated and then used by the family members or others

If we do not want to reuse the leftovers, we still should not throw them away, but give them away to someone who can use them again. They also can be sold to those who collect them for recycling them industrially.

Some tips on converting leftover into useful items

- a) We can prepare items like waste paper baskets, plates etc. from used paper. Plates or buckets, bowls out of hard plastic or metal can serve as models, several layers of paper pieces can be pasted onto the model with glue made of flour. The last layer could be colorfully printed paper or it could be coloured by hand.
- b) Used plastic bags could be collected to make pillows, cushions or toys, etc. Bags should be collected, cleaned, then cushion or pillow covers prepared, which are filled with plastic bags. Then the cover has to be stitched. Now your cushion or pillow is ready for the use. Plastic bags can also be cut apart, woven into baskets or ropes etc.
- c) Tin cans and bottles can be transformed into pencil holders, brush holders, flower vase etc. only by cleaning them and decorating them with painted paper.

Advantages of the reusing inorganic leftovers

- a) reduction of waste accumulation in the house and avoid fast overfilling of the waste container.
- b) reduction of transportation of a lot of waste to the landfill site.
- c) provision of resource material which is very limited to our country i.e aluminum, copper, tins etc.
- d) production items for income generation.

2. Objectives of the session By the end of the session, the participants should be able to do the following:

- a) to explain ways of reusing different leftovers
- b) to describe the advantages of reusing the household leftovers
- c) to explain the procedures of reusing some of the used inorganic leftovers like: transforming leftovers into some useful or decorative items, such as masks, plates etc. from used paper, pillows, cushions etc. from used plastic bags, pencil/pen holders from used tin cans
- d) to become creative in converting leftovers into useful items and reducing waste and
- e) to be prepared to collect and hand over the leftovers that they cannot recycle, reuse or that they do not want to do so to the scavengers

3. Materials required to conduct this session:

- a) Book: 'My Clean and Waste Free Neighborhood'
- b) Lesson: 'Recycling/Re-using Leftovers' (page 54-58).
- c) Samples of transformed leftovers like:
 - coloured tin cans, bottles
 - items prepared by used paper (by not using pulps)
 - plastic bags, covers of cushion, pillows, thread and needle
 - glue, colors, used paper, decorative paper
 - some oil.

4. Necessary preparation for the session

Read the lesson on 'Recycling/reusing leftovers, page 54-58, of the book and become familiar with the instructions on how to reuse different leftovers. Practice them few days before and prepare some items for this session. Be creative, in reusing the leftovers.

Part 2 (to be followed during the session)

Steps to be taken by the facilitator while conducting the session

Step 1

Discuss on the following questions with the participants:

- a) What are the advantages of recycling leftovers, especially used paper.
- b) Have you reused any leftover? If yes, which ones and how?

Step 2

Distribute the books and ask the participants to turn the page 54 and read out the title of to-day's session.

Step 3

Divide the participants into 3 groups and assign the following scene to each group:

- Group 1 to look at scene 1 and 2
- Group 2 to look at scene 3 and 4
- Group 3 to look at scene 5 to 7

Request to look at the assigned scenes and get familiar with them. Ask the participants to discuss in groups about the scenes before sharing their ideas with others.



Recycling/Reusing Leftovers

Practical exercise of making paper plate; plastic pillow/mats; pencil holders/flower vase



Scene - 1

Often we consider these leftovers as useless items. But they can have new forms and receive new purposes.



Scene - 2

Used canes and bottles should not be thrown away. We can make pencil holders or flower-vase from the used canes and bottles.



Scene - 3

The use of plastic bags is increasing rapidly. It is convenient to carry things home. But when disposed inappropriately they are scattered on the road and even blocking the drains.



Scene - 4

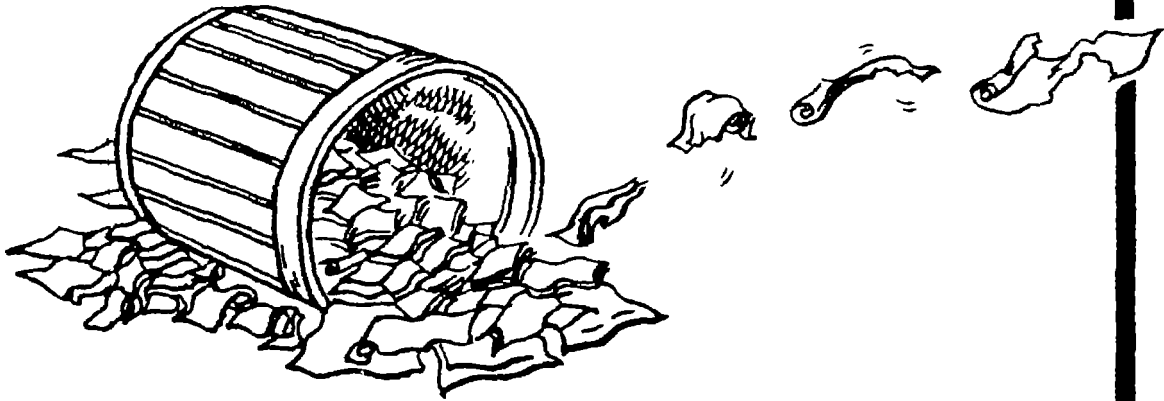
Used plastic, if used for wet and oily commodities, can be cleaned with water and dried.



Store the plastic bags into the pillow, mat, cushion cover till adequately filled. Close the cover.

Pillows, mats, cushions filled with leftover plastic bags can be used comfortably.



**Scene - 5**

Leftover paper can be used for many purposes. One need not burn or throw them away.

**Scene - 6**

Rinse the crumbled papers on water with rice glue. Go on pasting on the back of a metal plate till a desired thickness is reached.



Scene - 7

One can make plates, bowls, measuring cups out of waste papers and use for storing dry commodities such as peanut, fruits, grains, beans etc.

Lesson learned

- a Leftovers given new shapes or pattern and used for new purposes.
- b Pillows and mats from used plastic bags.
- c Many different items made from waste papers.

Step 4

Ask one member from each group to report what the group members have seen in the scene, such as:

- Ask Group 1 to describe what they saw and understood from scene 1 and 2 (page 54).
- Request the remaining groups to comment on the descriptions presented by group 1.

Step 5

Ask group 2 to describe what they saw and understood from scene 3 and 4 (page 55 and 56). Request the remaining groups to comment on the descriptions presented by group 2.

Step 6

Ask group 3 to describe what they saw and understood from scene 5 to 7 (pages 57 and 58). Request the remaining groups to comment on the descriptions presented by group 3.

Step 7

After the presentation by all the three groups ask the following questions:

- a) Name different leftovers, beside organic ones, which are often thrown as waste?
- b) Have you ever reused any of these leftovers? If yes, which ones? And how?

Step 8

Divide the participants into 3 groups and assign with the task of preparing different objects from the waste as given below:

- Ask Group 1: to prepare paper plates and bowls out of used paper.
Ask Group 2: to prepare cushion or pillows out of used plastic bags.
Ask Group 3: to decorate tin cans or bottles to be used as pen/brush holders, flower vases etc.

Step 9

Distribute the necessary materials to the concerned groups and then have the groups begin their works.

Step 10

Go to each of the groups and provide your guidance and suggestions, if they are facing any problems.

Step 11

After completion of the assigned work, ask each of the group to display the objects they made and to explain the procedures they had adopted to prepare the items. Give ideas for the improvements.

Step 12

Discuss with the participants on the following questions, presenting the samples of leftovers like paper, plastic, tin cans and bottles.

- a) Are these materials really waste?
- b) What could be done with them instead of throwing/dumping them as waste?

Step 12 (continuation)

- c) Who, - men, women and/or children - in your family or neighborhood could help to do the following:
- collect leftovers for reuse or recycling;
 - prepare various objects from the leftovers: paper, plastic bags, tin cans, bottle,
 - give away those leftovers to scavengers/waste collectors which cannot be reused or recycled at home;
 - collect money from scavengers or waste collectors .

Step 13

Summarize today's session :

1. You have learnt in today's session to prepare and use inorganic leftovers by transforming them into paper mask, plates, bowls etc and tin cans into pen/brush holders, bottles into flower vase and plastic bags into cushion pillow etc.
2. The advantages of reusing the leftovers are:
 - reduction in the volume of waste
 - reduce the transportation cost of the municipality to the landfill site
 - utilization of waste as resource materials for the industry.
 - motivating people to become creative in transforming leftovers into useful/decorative items.
 - production of items from leftovers, for income generation.

Step 14Home Assignment for the participants:

Give a demonstration to your family members and neighbors on how to reuse tin cans, plastic bags, paper, bottles etc

- a) Prepare some of the items out of paper, tin cans, bottles, plastic bags and present them after one month when all participants meet.

Session 9: Recycling of leftovers (industrially)

Recycling/Reusing Leftovers

- A What can we do to keep our Community clean?
- B The Ladder Snake Game

Part 1: (to be read before conducting the session)

Before giving the session, please study the following contents and objectives which should be achieved through the session.

1. Subject matter

1. Solving the problems of waste accumulation in a sustainable and environmentally sound way is to reduce waste generation at the source itself i.e. at our homes, shops etc.
2. Waste can be reduced by:
 - a) Producing less waste using one's own bag and containers for buying;
 - b) Preparing compost from kitchen and garden waste;
 - c) Reusing/recycling some leftovers manually;
 - d) Giving or selling those leftovers which can be recycled industrially.

(Most of the plastic items can not be recycled. They contaminate the soil for many years. Their use should be avoided).

3. The ideas how we can reduce waste is presented clearly in the poster 'What we can do to keep our community clean?' By following the above mentioned rules presented in the poster, only a small amount needs to be disposed in the containers (see the poster).
4. Waste pickers are people who collect leftovers like used bottles and sell them to factories, which clean them for reuse or recycle them.
5. Waste pickers, who come to our home, pay for the leftovers, which we give them. If we do not want to reuse the leftovers ourselves, we can collect them and give them to waste pickers. Ask them to come to your house in your convenient time.

6. The rules of responsible waste handling can be played by the game "Snake and ladder game." The game is easy to play, just like 'Ludo'. One can play the game with as several friends. Each player has a distinct figure (*goti*) and has her/his turn to show the dice, one player after the other. A dice can be prepared from waste paper or even different numbers can be written in small pieces of paper (according to the number of players).

The figure will be moved according to the points shown on the dice or the piece of paper. If the player arrives at the place where a ladder is shown, s/he can climb up. Similarly, if he/she arrives at a place where a head of the snake is shown, s/he should come down. Why we can move up or have to go down, we can read in the fields we arrive. The game intends to remind the players about the impact of our good and bad habits on waste handling and hygienic behaviour. The players who reaches the top first, will be declared the winner of the game.

7. This session intends to convey the aforesaid information to the participants with the help of a poster 'What can we do to keep our community clean?' and the game 'Snake and ladder'.

2. Objectives of the session

At the end of the session the participants will be able to:

- name the ways of reducing waste at one's own home.
- explain why the use of plastic should be avoided.
- list all waste items which can be sold/given to waste-pickers.
- sell or give leftovers which can be recycled industrially to waste pickers.
- contact the shops, restaurant or tea stalls, neighbors and discuss on responsible management of waste they produce.
- appreciate the value of waste.

3. Materials required to conduct this session

- a) Poster: 'What can we do to keep our community clean?'
- b) Book: 'My Clean and Waste Free Neighborhood'
- c) Lesson: 'What can we do to keep our community clean' (page 59 - 61)
- d) Game: a. 'Snake and ladder game and a dice'
- e) 'Instruction to the game' (page 61 to 63)

4. Necessary preparation for the session

Read before the class the text: 'What can we do to keep our community clean' given in the page 59 of the book and relate it to the messages and pictures in the poster: 'What can we do to keep our community clean' Read the instructions given in page 61 of the book and become familiar with the reasons why some one climbs up and why others go down in the game.

Part 2 (to be followed during the session)

Steps to be taken by the facilitator while conducting the session

Step 1

Discuss with the participants on the following questions:

- a) What are the ways of reducing waste at our homes which we have discussed so far?
- b) Which waste items can be transformed manually and then used again? Which family members could assist?
- c) Why is it important to cooperate in proper waste handling especially in places where many people live together.

During the discussion, give your ideas too and give further information if necessary.

Step 2

Declare today's topic, place the poster A :“What can we do to keep our community clean”, on the wall or on the board so that everyone can see it. Ask the participants to look at the same time at the miniature poster given in page 60 of the book.

WHAT WE CAN DO TO KEEP OUR COMMUNITY CLEAN

Waste produced in the households should not be scattered and dumped everywhere. It looks ugly, smells bad and can make us sick. By dumping waste in the streets we are asking too much of any waste management system to keep our city clean.

We can collect all our waste and bring it to the next container. This way, the container fills up very fast. It is very hard for a waste management agency to deal with so much waste.

We can reduce our waste production if we produce less waste, e.g., if we go shopping with our own bags and bottles, pots or other containers. We can therefore avoid to buy the goods in wrapping paper, plastic bags or in a tin.

We can further reduce the waste by making compost out of kitchen and garden leftovers. This makes an excellent organic fertilizer. At the same time, bad smells and hygienic risks will nearly be eliminated.

We can further reduce our waste by utilizing some of the leftovers for new and useful purposes. For example, bags, bottles and tins can be cleaned and used again; some even may be decorated.

We can further reduce our waste further by separating those leftovers which can be used by others, like glass, tins, paper, plastic bottles or bags. We can give them away or sell them to scavengers. Doing all this a very small rest of leftovers will have to be carried to the container.

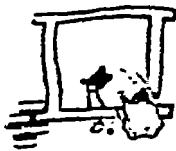
Lesson learned

- a Activities which can be carried out to keep the community clean.

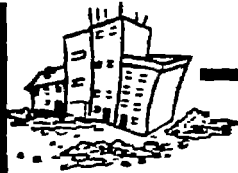
WHAT WE CAN DO TO KEEP OUR COMMUNITY CLEAN

ACTION

RESULT



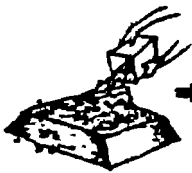
Waste produced in the households should not be scattered and dumped everywhere. It looks ugly, smells bad and can make us sick. By dumping waste in the streets we are asking too much of any waste management system to keep our city clean.



We can collect all our waste in it to the next container. This way, the container fills up very fast. It is very hard for a waste management to deal with so much waste.



We can reduce our waste production if we produce less waste, e.g., if we go shopping with our own bags and bottles, pots or other containers. We can therefore avoid to buy the goods in wrapping paper, plastic bags or in a tin.



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We can further reduce our waste by utilizing some of the leftovers for new and useful purposes. For example, bags, bottles and tins can be cleaned and used again; some even may be decorated.



We can further reduce our waste further by separating those leftovers which can be used by others, like glass, tin, paper, plastic bottles or bags. We can give them away or sell them to scavengers. Doing all this a very small rest of leftovers will have to be carried to the container.



Step 3

Discuss the following questions:

1. Describe the pictures on the top. How do people handle their waste?
(picture 1)
2. What are the different ways of reducing waste in the container (see the following rows of pictures on the left)?
3. What is the benefit of reducing the volume of waste to be collected in the container?
4. If we follow the same "actions" as shown in the pictures on the left; what "results" will occur in our neighborhood and locality?
5. Now, do you still consider leftovers as waste which is to be thrown away?
6. Who, in your house, - men, women or children , are responsible for collecting the leftovers, inviting the waste pickers and selling the recyclable items to them?

Step 4

Ask the participants to open page 61 and invite them to play a game called "Snake and Ladder Game."

- (a) Explain how to play the game.

The Ladder Snake Game

(An Exercise for responsible waste handling)

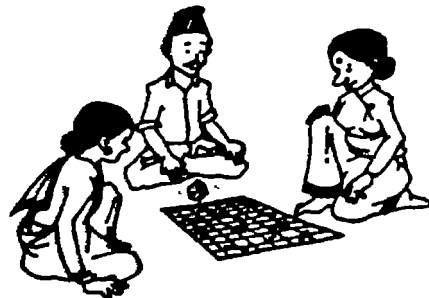
Instruction how to play the ladder snake game

Snake and ladder games is like Ludo but with one difference: in Ludo you can only start the game by throwing number one on the dice. But in this game you can begin with any number shown on the dice.

How to play

You can play with as many friends as you like:

Each player has a figure and each have their turn to throw the dice, one player after the other. Instead of using a dice you can cut small pieces of paper and write on each paper one number. Each player pulls one paper.



Move your figure the same amount of shown on the dice. If the player arrives at the place where a ladder is shown, he can climb up.

The player who reaches the top first will be declared the winner of the game.

Some ideas on how to make the figures and dice

1. Participants can make their own figures and dice: They can copy the dice from the picture, cut it out and then glue it. For the figures, they can use soybeans, stones or buttons.
2. They can also make the dice with a piece of chalk or clay.
3. In case you don't have the opportunity to make a dice, you can write on 6 pieces of paper which are the same size, the numbers 1 to 6 (on each piece of paper, one number). Put them onto the floor face down so your can't see the number. Each player then picks up one piece of paper and moves the same number of steps as indicated on the paper.

Step 5

Ask one of the participants to read the text of field No. 2 and 19 (if he/she can read, otherwise read it to them). Explain, why one can climb up. Similarly, read the text of room No. 24 and 6. Explain the reason why the player has to move down. Tell them that the game has certain messages which we have to understand clearly.

Step 6

Divide the participants in groups of about 4/5 players in one group. Ask them, to play the game.

Step 7

Ask the participants to come together and discuss on the following questions:

1. What "behaviour" is regarded as positive? Why? And what behaviour is regarded as negative? Why?(Refer to the picture -page 62)
2. What happens with the collected empty tin cans and bottles? (Refer to field 2 and 19 of the game road).
3. What happens if we throw waste in the river? (Refer to field 24 and 6).

40 the street	39 ...hygiene rules.	38	37 you dumped waste....	36 ...to produce waste.	35 public morals your car...!	34	33 You left food..
25	26 You cleaned....	27 you are following.	28	29 You ate food..	30	31 uncovered.	32 ...an irresponsible way.
24 you threw waste...	23 ...by blowing the dust into the air.	22 into the street.	21 you avoided to....	20 ...to produce (waste)!	19 ...to recycle them..	18 you saved....	17
9 you have good habits.	10 ...for your plants.	11 ...without washing your hands.	12 you collected waste from the machine.	13 you did not..	14	15	16 you feel and act
8 you used compost..	7	6 ...into the river.	5 ...use the toilet.	4	3	2 you separated left over in order....	1

Step 8

Summarize today's session :

1. We can reduce waste by composting, reusing and selling them.
2. We should not throw all leftovers away but collect them and sell them to the waste pickers.
3. We repeated in "The Snake and Ladder Game" that means responsible waste handling keeps us and the environment healthy.

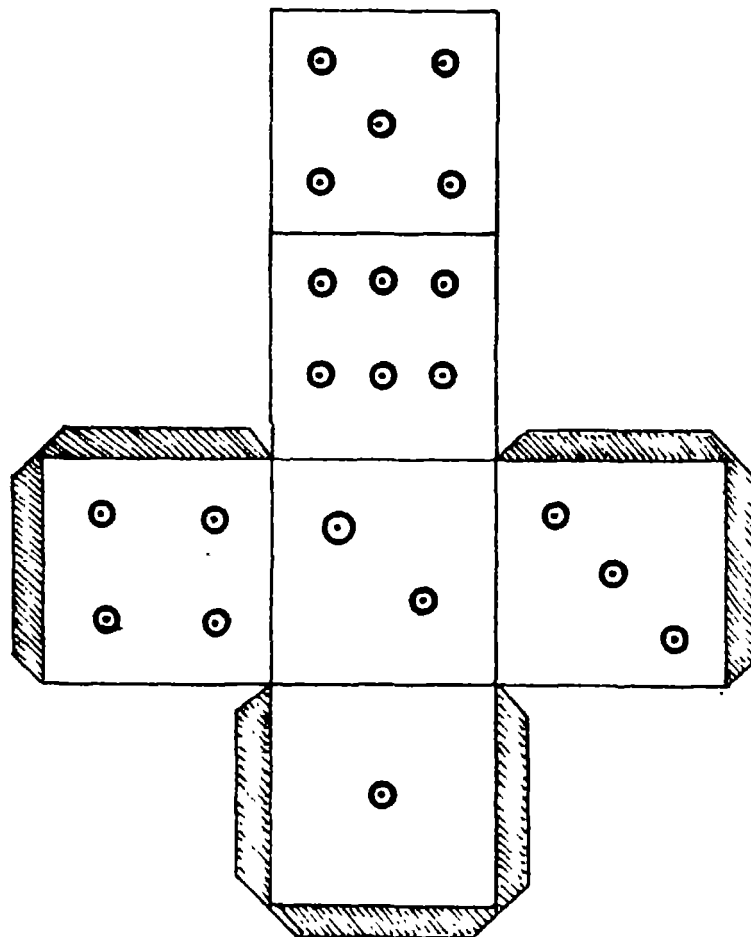
Step 9

Home Assignment for the participants:

1. Find out from waste pickers what they do with their collection of leftovers.
2. Establish contacts with waste pickers so that they come regularly at a convenient time to collect your household leftovers like glass items, paper card board, tin cans, plastic items etc.
3. Introduce the "Snake and Ladder Game" to the family and neighbours and explain the meanings. Motivate the children and youngsters and neighbours to improve their behaviour of waste handling.

Lesson learned

- a Material required to play the "snake and ladder" game
- b Ways to make dice and figure
- c Rules and procedure of playing "snake and ladder" game.



Sample of making a dice from paper.

Session 10: Joint Cleaning Activities & Planning the Future Activities

My Beautiful City

Part 1: (to be read before conducting the session)

Before giving the session, please study the following contents and objectives which should be achieved through the session.

1. Subject matter

- a) The rapidly increasing population and the increasing variety of goods getting into in the urban areas of Nepal lead to a waste problem in many cities. The streets and roads are full of waste. The physical well-being and the environment of the urban population is increasingly effected.
- b) The municipality alone will not be able to solve the waste problem. People have to take over the responsibility to keep their living space clean and to handle waste in an environmentally sound way. Several gender -, age -, and class/cast groups of a the urban area have to participate in this responsibility.
- c) Individuals and family members, especially those, who have participated in the non-formal classes on solid waste handling, should plan and coordinate their activities in their neighbourhood, motivating others to participate:
 - i. reducing the production of household waste to a minimum quantity;
 - ii. disposing the waste at appropriate place, such as containers, tractor,.
 - iii. motivating and informing family members, friends, neighbors etc. on responsible waste handling;
 - iv. organizing neighbours in the community to:
 - collect recyclable leftovers separately and contact people who buy them for reuse or recycling,
 - carry out a joint cleaning campaigns,
 - contact municipal authorities and ask for technical assistance in keeping the community clean.
- d) A tentative time frame should be estimated as to when the particular activities will be started and completed. Some activities should be done continuously.

This session intends to convey the aforesaid information to the participants with the help of the story 'My Beautiful City' included in the book "My Clean and Waste Free Neighborhood" and suggestions to a future activity plan.

2. Objectives of the session

At the end of the session the participants should be able to:

- a) recall the harms due to indiscriminate throwing/dumping of waste;
- b) name the ways of reducing household waste;
- c) explain the need for cooperative action with the municipality in keeping one's own community clean;
- d) explain the advantages of a joint efforts of the people in keeping their neighborhood/ward clean;
- e) prepare an individual work plan with tentative time schedule for implementing various activities of environmentally sound waste handling in the household;
- f) accept the responsibility of participating actively in solving the solid waste problem in the community.

3. Materials required to conduct this session

- Book: 'My Clean & Waste Free Neighborhood'
- Story: 'My Beautiful City'
- This guide book for you

4. Necessary preparation for the session

Read the story: 'My Beautiful City' and become familiar with the contents of the individual work plan and the methods how to conduct the session before conducting the class.

Part 2 (to be followed during the session)

Steps to be taken by the facilitator while conducting the session

Step 1

Distribute the book 'My Clean and Waste Free Neighborhood' to the participants. Declare today's topics which are:

- (A) "Joint cleaning activities in the neighborhood" which is dealt by the story 'My Beautiful City'.
- (B) Planning the future activities.

Step 2

Request one of the participants to read out the scenes 1 to 8 of the book (page 64 to 68) and ask the other participants to look at the pictures carefully as they are read out. If participants cannot read do it by yourself.

My Beautiful City

Joint Cleaning Activities in the Neighborhood

Krishna is the son of Maya. He looks around feeling proud and happy. He wants to show his beautiful city to Laxmi.



How beautiful my city is, many people come to admire it. Now, finally, Laxmi is coming.



*I will show her
all the beautiful places.*



Scene - 2

*Phew! How filthy and disgusting
yuk! It really stinks and it's sougly!*

All of a sudden he slips on some waste
and falls down.



Scene - 3

What will Laxmi say? We can't welcome her back with the place looking like this - we'll get sick - maybe with cholera. No, I have to do something. This is my city and I want it to be clean and beautiful,...

... so that Laxmi can come.

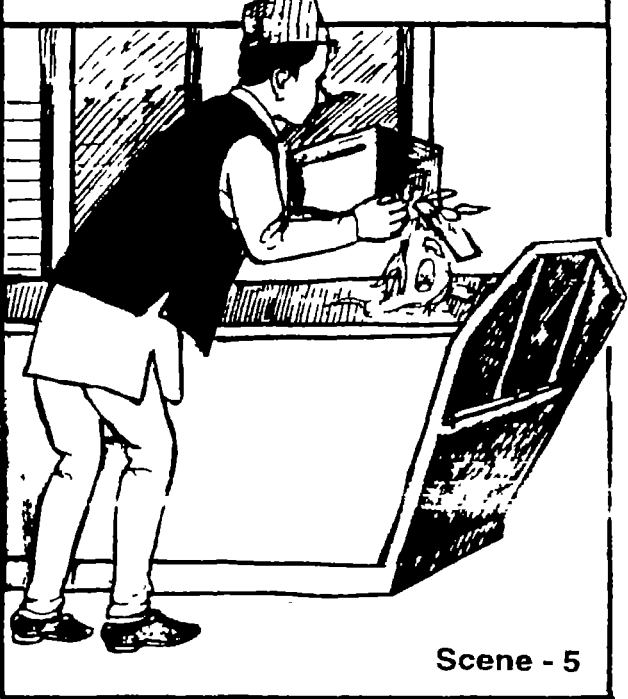


Scene - 4

He cleans the courtyard and puts the



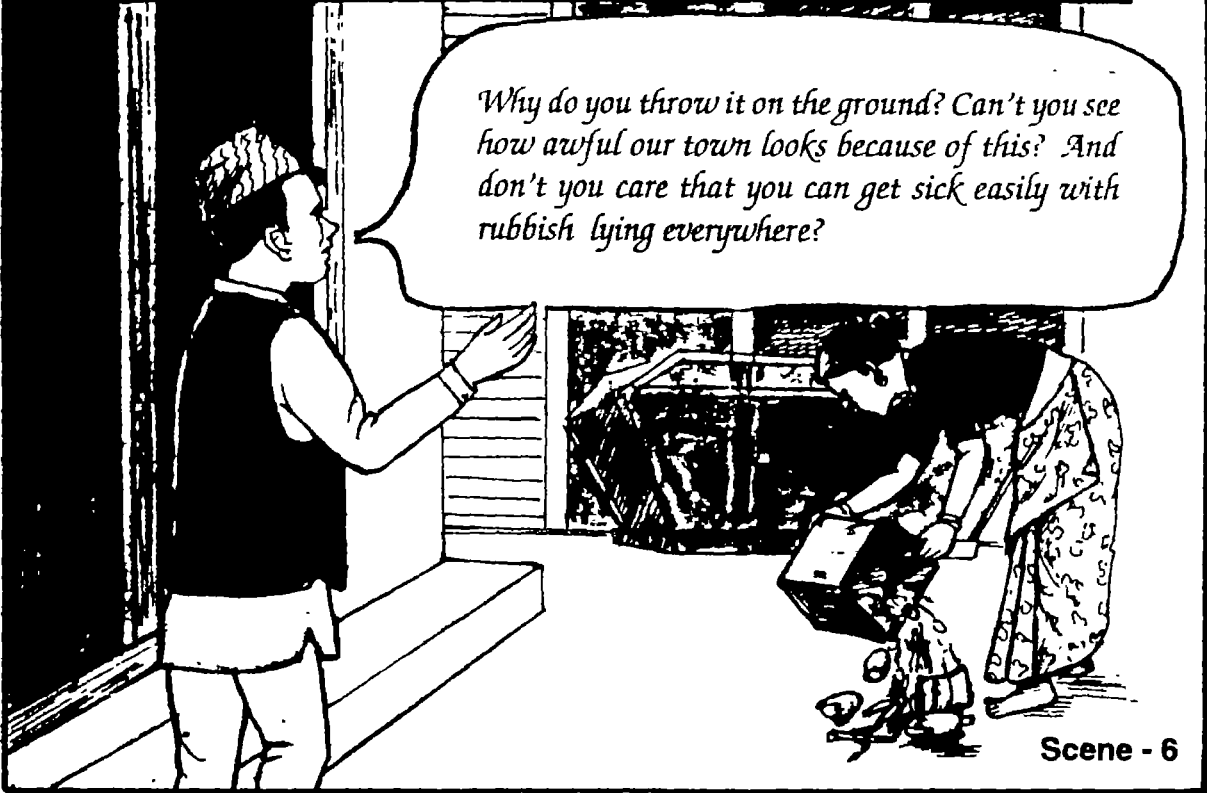
waste into the container standing nearby.



Scene - 5

Others pass by and some waste is dropped.

Why do you throw it on the ground? Can't you see how awful our town looks because of this? And don't you care that you can get sick easily with rubbish lying everywhere?



Scene - 6

How can we become sick and how do we get hurt?



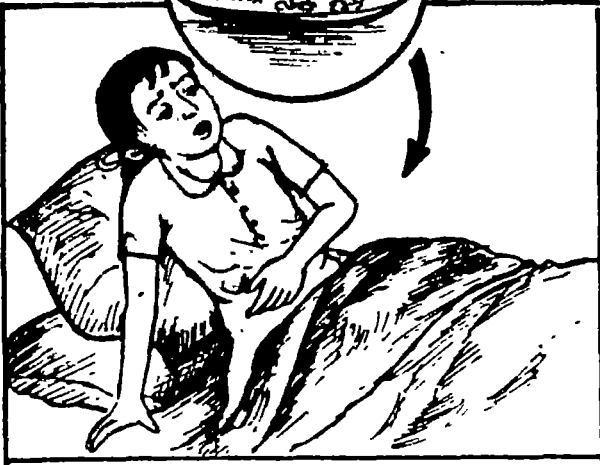
Scene - 7

Scene - 8



If you throw pieces of glass, tins

If you eat contaminated food..



you can easily fall sick.



you can easily hurt yourself.

Step 3

After reading the text from Scenes 1 to 8 ask the participants to discuss on the following questions and answers

- a) How was the city, when Krishna decided to show it to his friend?
- b) Why did Krishna want to clean the city? Could he alone keep the city clean?
- c) Describe your surroundings, is it similar to the one in the story?
- d) How do you feel about it?

Step 4

Ask one of the participants to read scenes 9 through 11 (pages 69 to 70) loudly. Ask the rest of the participants to look at the pictures, as they are read out.

Some people who had thrown waste on the streets are listening and are now convinced that it was the wrong to throw waste carelessly in the streets.

I thought somebody else would clean it.

... but you are right, it is our town ...

and we have to do it ourselves.

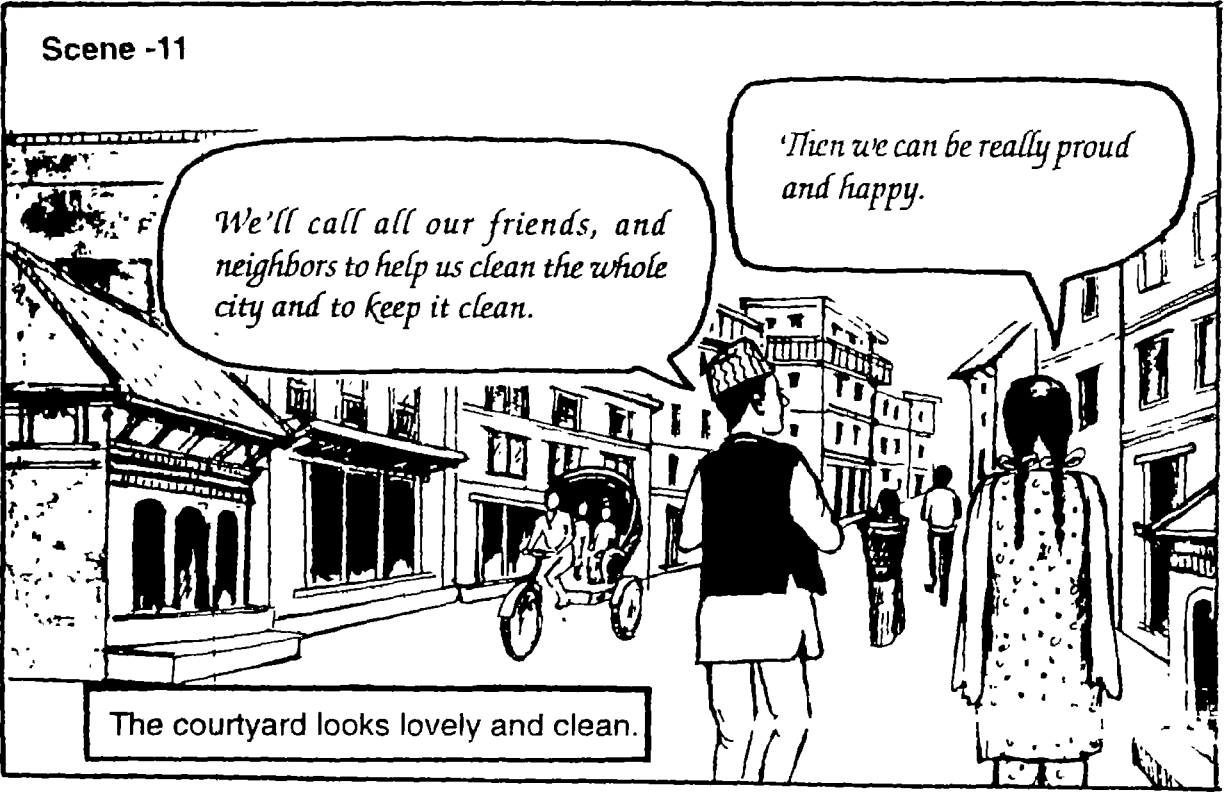
We want to live in a beautiful place and not get sick.



Scene - 9

I'll go and get my parents.





Step 5

Ask the participants to discuss the answers to the following questions:

- a) Describe what the people in scene 9 are doing
- b) Have you ever worked collectively with your neighbors, friends in keeping your community clean?
- c) In what ways could you become active now?
- d) Was Laxmi happy to visit the city? Why? (scene 10).
- e) What was Krishna proud of? How would you have felt if you were in his place? (scene 11).
- f) What sorts of activities can be done to keep your neighbourhood clean?

Step 6

As the ten-day course is coming to an end, ask the participants to recall what they have learnt so far. To be able to answer easily, ask them to note down the important points learnt in the Chapters 1 to 10. Encourage them to summarize and clarify doubts and leave the floor open for raising questions.

Step 7

Ask the participants to prepare a **plan of actions**, either in writing or verbally (for those who are illiterate Jot down what have been planned by them). Tell the participants that they should clearly state what, when, and how they are going to go about actively applying the knowledge and skills learnt so far from the course.

To facilitate the preparation of the action plan, read out some of the following expected outcomes of the future activities of the participants:

1. No non-biodegradable waste such as used plastic bags, paper, glass- or metal pieces as well as bio-degradable waste should be seen scattered around the houses and possibly in streets.
2. The families should start collecting bio-degradable and non-biodegradable waste in separate containers in the homes.
3. The participants should have started compost preparation in their houses or in the neighbourhood.
4. Waste paper, if not reused, should be collected to give away to the waste collectors.
5. Used plastic bags are either used for making ropes, mats, pillows and cushions or collected separately to give away to the waste collectors

Step 7 (continuation)

6. The residents of the wards should conduct cleaning campaigns within the ward periodically by forming a solid waste management committee.
7. The volume of waste generated from the household per day/week should be reduced drastically.
8. The habit of carrying one's own bag for shopping should be adopted.
9. The system of door-to-door collection of recyclable leftovers by waste collectors or scavengers should be established.
10. The Municipality should have collected the waste from the collection point regularly.
11. Educational activities should be carried out and awareness should be raised on reusing and reducing waste.

Step 8

Let the participants write - those who can do so - or report verbally the action plan they have thought of. Take notes of those who report verbally. Collect the **plan of actions**.

Step 9

Concluding the session:

If it is possible to close the 10-day session formally, ask two of the participants, preferably one woman and one man, to provide their feedbacks about the training programme and you can also do the following.

Step 10

- a) Request the chief guest, preferably Ward Chairman, if available for delivering closing remarks and to announce the end of the training programme.
- b) Express your sincere thanks to the participants, Municipality and others who have provided their cooperation in conducting the training programme. Request the participants to implement the **plan of action** as soon as possible and ask them to contact you in case any problem arises.

Lesson learned

- a Advantages of clean ward and city disadvantages of dirty ward and city.
- b Everyone's responsibility to keep one's own city clean.
- c Clean ward and city with people's collaboration.

