

PROJECT BOOK IN ENVIRONMENTAL EDUCATION FOR CLASS VI



राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
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OFFICES OF THE PUBLICATION DEPARTMENT, NCERT

NCERT Campus

Sri Aurobindo Marg

New Delhi 110 016

Phone : 011-26562708

108, 100 Feet Road

Hosdakere Halli Extension

Banashankari III Stage

Bangalore 560 085

Phone : 080-26725740

Navjivan Trust Building

P.O.Navjivan

Ahmedabad 380 014

Phone : 079-27541446

CWC Campus

Opp. Dhankal Bus Stop

Panihati

Kolkata 700 114

Phone : 033-25530454

CWC Complex

Maligaon

Guwahati 781 021

Phone : 0361-2674869

Publication Team

| | | |
|------------------------------|---|---------------------------|
| Head, Publication Department | : | <i>Peyyeti Rajakumar</i> |
| Chief Production Officer | : | <i>Shiv Kumar</i> |
| Chief Editor | : | <i>Shveta Uppal</i> |
| Chief Business Manager | : | <i>Gautam Ganguly</i> |
| Assitant Editor | : | <i>Ram Niwas Bhardwaj</i> |
| Production Officer | : | <i>Arun Chitakara</i> |

Cover and Layout

Shweta Rao

Illustrations

Arvinder Chawla

FOREWORD

The National Curriculum Framework (NCF) – 2005, recommends that children's life at school must be linked to their life outside school. This recommendation has been implemented in the new textbooks published since 2006, in all major subjects. In the context of environment-related awareness, NCF-2005's vision implies an approach which cuts across the traditional boundaries separating one subject from another. According to this approach, knowledge of environmental concerns and the activities, which might deepen this knowledge and develop a positive attitude, need to be infused in the subject matter of all areas of the school curriculum at different stages. *The National Focus Group on Habitat and Learning*, which amplifies the NCF-2005 perspective, says: "The human habitat displays tremendous variability in space and time and its understanding has to be locale specific albeit in the context of a global vision. A great deal of the knowledge of the environment lies with India's barefoot ecologists, the people at the grassroots..."

NCF-2005 perceives school children as ecologists in their own right who need to be nurtured by a flexible school routine and teachers who engage with children in the construction of knowledge. In addition to the environment-related subject matter and activities incorporated in the syllabus and textbooks of all the major subjects, the National Council of Educational Research and Training (NCERT) has now decided to bring out project books for students of Classes VI to X. The books comprising this series attempt to build capacity for critical and multi-disciplinary thinking and a positive and problem-solving attitude. They aim at exposing students to the real-life world around them, both in nature and society, in order to enable them to examine, assess and interpret the problems and concerns related to the environment. The ultimate goal is to promote a socio-cultural ethos which facilitates India's attempt to pursue the path of ethically sound and sustainable development. The activities included in this series of books require extensive and continuous observation and

documentation which would enable students and teachers to notice patterns in phenomena. Uploading of the results of such projects on publicly accessible websites will gradually help the nation to create a transparent and comprehensive database on the environment.

The success of this effort crucially depends on the interest and enthusiasm that school principals, teachers, parents and civil society in general show in encouraging children to carry out the projects and activities outlined in the present series. It is extremely important that students' project work is assessed in a holistic manner, giving due regard to the motivation and enthusiasm of each student rather than through the conventional system of evaluation which ignores individuality and originality.

NCERT appreciates the hard work put in by the Project Book Development Committee in preparing this series and we are especially grateful to Professor Madhav Gadgil for guiding the work of this Committee. Several teachers contributed to the development of this book; we are grateful to their principals for making this possible. We are indebted to the institutions and organisations which have generously permitted us to draw upon their resources, material and personnel. NCERT is thankful to Professor Mrinal Miri and Professor G.P. Deshpande who co-chaired the National Monitoring Committee appointed by the Ministry of Human Resource Development to oversee the implementation of NCF-2005. We thank Dr Kiran Chhokar, Programme Director, Centre for Environmental Education, Delhi, for her invaluable inputs during the meeting of the National Monitoring Committee. As an organisation committed to systemic reforms and continuous improvement in the quality of its products, NCERT welcomes comments and suggestions which will enable us to undertake further revision and refinement of this important series.

New Delhi
9 January 2009

Director
National Council of Educational
Research and Training

NOTE TO THE STUDENTS

Everyday, we come across various environmental issues, such as, pollution; scarcity of food and water; health and diseases; deforestation, flood, earthquake, etc. in the daily papers and television channels. You have learnt about many of these issues in various chapters in your textbooks. In fact, you will find these concerns being discussed in textbooks from Classes I to X. Let us now become active participants in addressing these issues so as to be able to work on the problem, find out the causes, and find solutions. We may share our findings with the society. This is the basic purpose of bringing out this project book.

It will not be useful to work on problems of which we do not know much about or we do not come across in our daily lives. Therefore, in this project book the development team has tried its best to come out with twenty projects, which you can take up, irrespective of the place you belong to. You may find that some of the steps suggested may not be suitable in your situation. In that case, you can modify the steps with the help of your teacher.

You may not be able to take up all the twenty projects in this year. However, you must try to complete as many projects as possible which should not be less than two. Some of the projects may require group work. In that case, you should try to help one another to complete the project successfully. In many occasions you may have to visit officials of different departments, elders, politicians, doctors, scientists, houses, etc. Make sure that you obtain permission or appointments before you go. You can also take a permission letter from your school. Be humble, soft spoken and never use force while taking an interview or obtaining information and do not hurt the sentiments

of others. In case of coming across any problems during your project take the guidance of your teachers. Discuss with them and work towards completing your study successfully. We hope that you will enjoy each step of this journey.

Work sincerely on the projects that you have chosen to get authentic results. The small things that you do today will contribute to a bigger change tomorrow. Remember *'little drops of water make a mighty ocean'*.

NOTE TO THE TEACHERS

As you are aware the *National Curriculum Framework* (NCF) – 2005 recommends that environmental concerns be incorporated in all the subjects and appropriately discussed in all the levels of school education. As such, during the course of the development of textbooks of different stages, irrespective of the subjects, utmost care was taken to adequately infuse environmental issues and concerns wherever it found its relevance. This is evident from the textbooks that have been produced for different stages where ample opportunities have been provided to students to actively engage themselves in activities pertaining to environmental concerns.

The more we care for our environment, more the reason we discover to care for it. Though the textbooks provide adequate opportunities to students to care for the environment, this project book has been prepared as an attempt to further students' involvement and active participation in environmental issues. This will enable them to understand the environmental problems in their vicinity, work on them to obtain first hand information, and come out with their own solution. The book contains twenty projects with the headings — title, background, methodology, conclusion and activities that can be taken up as follow up actions. The topics have been chosen keeping in view the environmental concerns that have been discussed in various textbooks for the class. An attempt has been made to make the projects workable in different corners of the country. However, modifications in the methodology or in the title itself are expected to meet the diverse local specific environmental concerns of different regions.

For the first time, an opportunity is being provided to students to take up projects independently. It is, therefore, necessary that students are given

the much needed encouragement and support. Hence, though the students will execute the projects by themselves, the role of teachers as a facilitator and guide will be instrumental for the successful completion of the projects. For this, teachers would be required to assign appropriate projects to each student, modify and fine tune the methodologies, keep track of the developments and also help the students wherever necessary to complete the task smoothly. Teachers are expected to ensure that students take up as many projects as possible but with a minimum of two projects by each student.

Evaluation strategy can be prepared independently by the teacher concerned to evaluate the projects. The teacher concerned will decide whether evaluation should be done for every step of the project or on completion of each project. Whether marks or grades are to be allotted is left to the discretion of the teacher or the school authorities. Whatever pattern the teacher or school employs for evaluation, the marks or grades should be shown in the students' report card. There should be no pass or fail grading. Every student should have completed a minimum of two projects at the end of the academic session and thus should be considered pass.

Last, but not the least, this attempt of introducing project book is to bring about attitudinal change in the students towards environmental concerns and nurture them to become a concerned and responsible citizen.

PROJECT BOOK DEVELOPMENT COMMITTEE

CHAIRPERSON, ADVISORY GROUP IN ENVIRONMENTAL EDUCATION

Madhav Gadgil, *Emeritus Professor*, Agharkar Research Institute, Pune

MEMBERS

Jaishree Sharma, *Professor*, Department of Education in Science and Mathematics, NCERT, New Delhi

R. Joshi, *Lecturer (SG)*, Department of Education in Science and Mathematics, NCERT, New Delhi

Sunita L. Varte, *Lecturer*, Department of Education in Science and Mathematics, NCERT, New Delhi

MEMBER-COORDINATOR

Chochong Vareichung Shimray, *Lecturer*, Department of Education in Science and Mathematics, NCERT, New Delhi

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*Little drops of water, Little grains of sand ,
Make the mighty ocean, And the blessed land.*

1. Reducing wastage of food



Background

It is commonly observed that food is wasted/thrown away in many households, hotels, restaurants, parties, etc. This wastage could be reduced if proper practices are followed during preparation and serving of food. It is important that each one of us tries to reduce wastage of food on every occasion.

Methodology

1. Select a place of study according to your convenience. This could be your home, a party or a celebration, etc. If you decide to do this exercise at home, note your observations for at least three days.
2. Decide a convenient measure to estimate the quantity of wastage. This could be a bowl or number of pieces depending on the type of dish.
3. Enter your observations in the given table.

Objective

To understand the need to reduce wastage of food.

| Sl. No. | Place of study | Name of food item | Estimate of amount wasted |
|---------|----------------|-------------------|---------------------------|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |

4. To find out the reason for the wastage, talk to the people who decide the quantity of food to be prepared. Also talk to the people who prepare the food, who serve it, who eat it, and those who waste it.

Conclusion

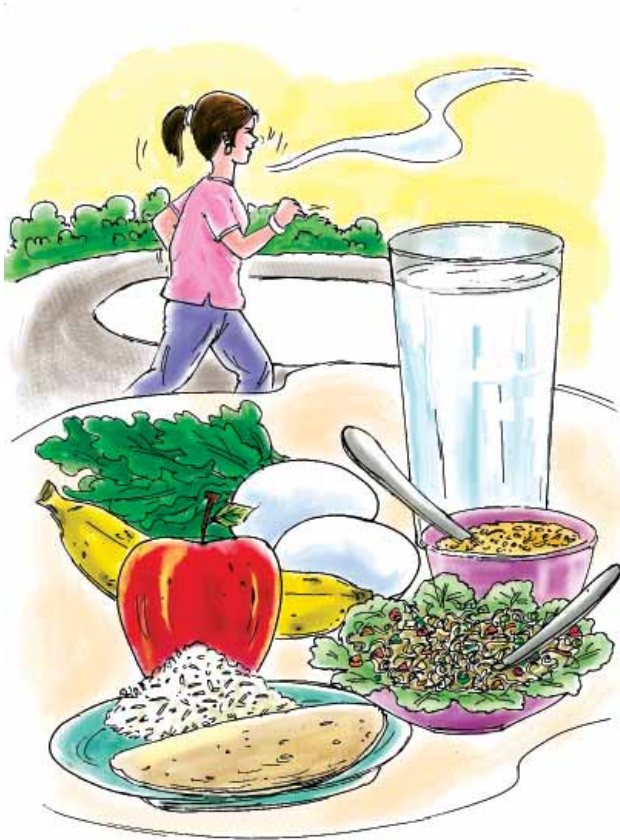
Write a short report giving reasons for the wastage of food. Suggest measures to reduce the wastage.

Follow-up

1. Try to spread the message that food should not be wasted.
2. Try to find out what does a restaurant do with the surplus food or food that is left unconsumed in the plate or serving dishes.
3. Find out what is done with the food that is wasted in the home and food that is surplus.



2. Nutrients in food



Background

Food items that we consume in our homes or outside, contain nutrients in different proportions. Everyone of us needs to consume food items that contain different nutrients in sufficient amount in order to maintain a healthy body.

Methodology

1. Make a list of all the food items (including milk, snacks, fruits and water) that you consume in a day.
2. Find out the nutrients provided by the food item and enter them in the table provided. If the nutrients present in a particular food item are not known, refer to books or consult teachers/elders/doctors/health workers/the internet.
3. Find out the nutrients present in your favourite food.

Objective

To assess whether our diet includes essential nutrients.

| Sl. No. | Food items | Food rich in the following | | | | | | |
|---------|------------|----------------------------|---------|-----|---------|----------|--------|-------|
| | | Starch | Protein | Fat | Vitamin | Minerals | Fibres | Water |
| 1. | | | | | | | | |
| 2. | | | | | | | | |
| 3. | | | | | | | | |
| 4. | | | | | | | | |
| 5. | | | | | | | | |

Conclusion

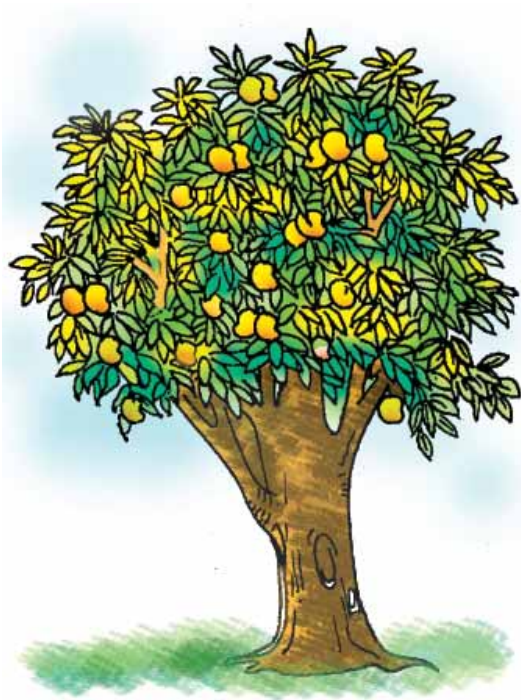
Based on the table that you have prepared, write down whether your diet consists of all the nutrients. If not, then list the food items that you think must be included in your diet to make it a balanced diet.

Follow-up

Find out about the effects of not having a balanced diet.

Apple, especially the peel, honey and pomegranate are high in antioxidants. Antioxidants prevent oxidation of molecules thereby protecting our body's cells from damage.

3. Getting to know trees



Background

There are many trees in our surroundings. But often we are unable to name them and we are also not aware of their usefulness.

Methodology

1. Identify how many different types of trees are there in your school/colony. Make a list of all those trees.
2. Take the help of your elders/teachers to find out their names and their usefulness.
3. Usefulness of trees may include their medicinal/food value, timber, firewood, shelter for birds and other animals.

Conclusion

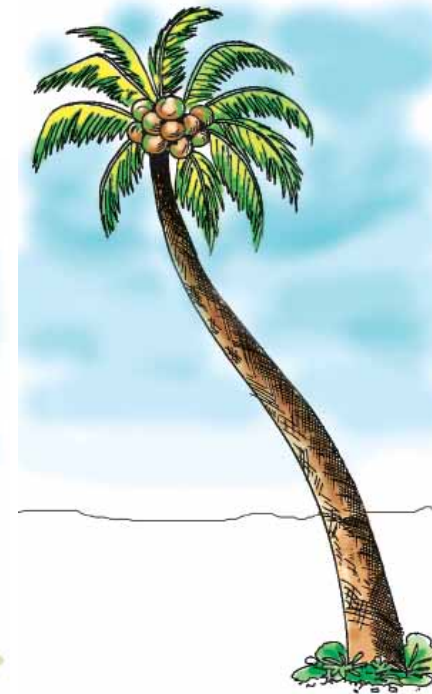
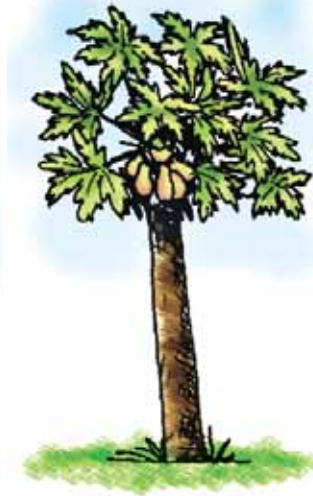
Prepare a chart with drawings/photographs about these trees and display it in your class or school notice board.

Objectives

- (i) To understand why trees are important to us.
- (ii) To identify different trees in a school/colony and know their unique features.

Follow-up

1. Prepare a small skit on the theme "Don't Cut Me".
2. Find out about the social, religious and cultural significance of trees to us.
3. Prepare a list of trees in your locality where birds come very frequently. Try to find out why they come to these trees and not to others.
4. Observe which part of the tree a particular kind of bird frequents.
5. Observe the different kinds of insects that you see on different trees.



4. Where do animals live?



Background

The places of living or habitats of different animals vary. Some live in water, some on land, some burrow into the ground, some amongst bushes, some on leaf litters, etc. Human activities often disturb their natural habitat and threaten their existence.

Methodology

1. Make a list of at least ten animals both big and small (other than domestic animals or pets found in your locality).
2. Find out where they live and put them in the form of a table as shown here.

Objectives

- (i) To know about the different types of habitat of animals.
- (ii) To develop respect for all living beings.

| Sl. No. | Name of animal | Habitat |
|---------|----------------|---------|
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |

3. Find out any human activity in your locality that has disturbed the habitat of any animal. Human activities in the locality may include felling of trees, construction of buildings/roads/dams, filling of ponds.

Conclusion

Write a short report about the different types of habitats of the animals that you have listed.

Follow-up

Collect information about animals whose existence is threatened by destruction of their habitat.



Note: Similar activities can be performed for plants.

5. Creating your own garden



Background

Gardens with beautiful flowers and attractive leaves are a pleasant sight. But often we do not know their names. We should try to know the names of these plants and how they are grown.

Methodology

1. Find out the names of different types of flowers grown in gardens in your area. Also find out their common names and local names. You can consult a gardener or your elders.
2. Find out flowers which grow in various colours. Also find out about plants with attractive leaves.
3. Find out the months during which these plants are sown/planted and when they flower and note them down in the table provided.
4. Also find out which type of soil/ manure they require.

Objectives

- (i) To find out the different types of flowers that are usually grown in gardens in your area.
- (ii) To prepare a plan to set up a small garden.

| Flowering season | | | |
|------------------|--|--|--|
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |

5. Draw some of the flowers grown in gardens with their distinctive petal shapes and colour them.



Conclusion

From the information that you have obtained, prepare a plan for creating your own garden in your home/school/locality.

Follow-up

1. Set up your own garden on a small plot or in pots in school or at home.
2. Find out about plants which have attractive leaves and can be grown in pots.
3. Find out practices essential to maintain a garden.



6. Controlling vehicular pollution



Background

The number of petrol/diesel driven vehicles on roads in cities as well as in rural areas is increasing every day. The gases released in the air by the exhaust of such vehicles or automobiles contain certain gases and particulate matter that are a health hazard. Exhaust gases from automobiles are one of the worst pollutants of air. The air pollution due to vehicles can be reduced by improving the quality of engines and proper maintenance. The government has prescribed certain norms for manufacturers of automobiles. Only such engines can be fitted on automobiles which meet the prescribed norms for level of pollutants in exhaust gases. Vehicle owners are also expected to keep pollution under control. This can be done by proper maintenance of vehicles. Pollution levels are measured at pollution checking centres. If the level of pollutants is found within prescribed limits, a certificate of 'Pollution Under Control' is issued to the vehicle owner.

Objectives

- (i) To appreciate the necessity of checking pollution level of vehicles.
- (ii) To become aware of the responsibility of vehicle owners.

Methodology

1. Visit a pollution checking booth. Find out what are the components of the exhaust they measure.
2. Try to find out roughly what percentage of vehicles fail to meet the prescribed standards.
3. Find out how each one of the polluting gases affect our health and damage the environment.

Conclusion

Prepare a report on your findings.

Follow-up

1. Prepare charts to campaign for reducing vehicular pollution.
2. Find out how many people in your locality get the pollution check done for their vehicles. If you come across people who have not got it done, find out reasons as to why this is so.



7. All plants are useful

Background

There are a variety of plants around us. We know only those plants which we eat or which we find useful for us. We are not concerned with the rest of the vegetation. It is important to understand that every plant is useful and that we should conserve each one of them.



ALOE VERA

Methodology

1. With the help of your elders/ teachers identify (names) different types of plants in your locality.
2. List the plants in the following manner.
 - (a) Make a list of plants directly useful to us.
 - (b) Make a list of plants not apparently useful to us.
 - (c) Observe if these plants are associated with other organisms in relation to food and shelter.
3. Find out how these plants have been utilised by local people.
4. Observe how they are destroyed by people.

Objectives

- (i) To know about different plants and their relationship with the environment.
- (ii) To understand their importance, value and the need for their conservation.

Conclusion

Based on the information collected by you prepare a report and discuss the usefulness of plants in your surroundings with your classmates.

Follow-up

Find out the long term effects of destroying vegetation and suggest ways by which it may be brought under check.

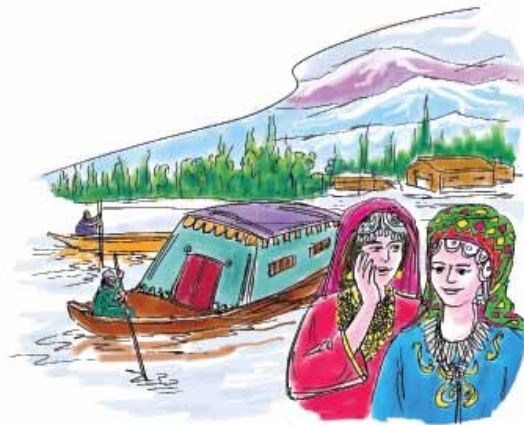


BASIL



MINT

8. Life in diverse regions



Background

All living things adapt themselves to the environment in which they live. In fact, adaptability is essential for life to exist in different climatic conditions. Harsh climatic conditions and their impact on the lives of animals and humans can be studied by observing life in a given climatic condition – be it scorching heat or freezing temperatures.



Methodology

Based on the reading of the text and classroom discussions, the students may follow the following process to carry out the activity.

1. Read and collect information about a particular climatic condition such as a cold mountain region or hot desert. Find out which animals are found in these areas and

Objectives

- (i) To reflect on the life of animals and humans in different climatic conditions.
- (ii) To get sensitised towards the impact of changes due to climatic conditions on the life of tiny organisms, animals and humans.

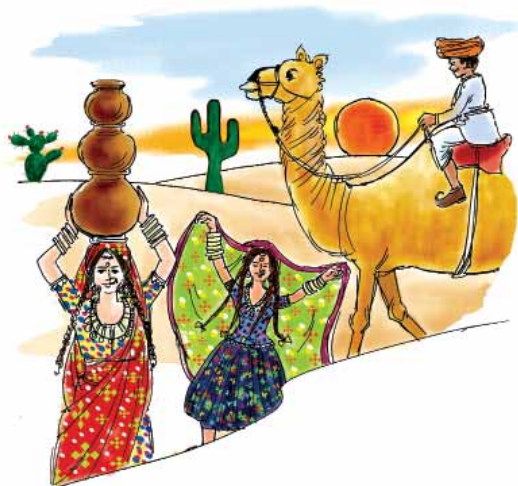
what their distinct features are. Also collect their pictures.

2. Collect pictures and stories about humans (dress, food, festival) living in these areas.

or

If you live in or around such areas, observe the ways in which animals and humans live. You may

- (a) identify and list various kinds of animals and plants;
- (b) observe their unique features;
- (c) note down the various incidents, events, and other distinctive features (dress, food, festival) of human life.



Conclusion

Write a brief report based on your observations.

Follow-up

Make a collage depicting distinctive features – dress, food, dances, festivals, etc., of different regions/situations.

9. Social interdependence

Objective

To understand the importance of interdependence between people engaged in various occupations.

Background

People in our immediate neighbourhood and society/community earn their livelihood by doing different kinds of work. Some are involved in agriculture related activities, others have jobs that provide services and some others are in non-agricultural production activities. Every activity that humans perform influences others directly or indirectly.



Methodology

1. List five things of everyday use (food, clothing, stationery, toys, etc.).
2. From where do you get these items?
3. Make a list of the people involved in providing these things to you in the form of a flow chart (producer, distributor, marketer, service provider). For example, to prepare food you may need cereals, pulses, vegetables, spices, water, fuel, stove and utensils. Each one of these items requires people to produce, process, package,

transport, store and sell before you can use them. At each step a number of people are engaged in doing different types of work.

Conclusion

Prepare a report based on your study showing social interdependence.

Follow-up

Prepare a chart on different jobs and occupations.



10. Compassion for living creatures



Background

Man has domesticated animals (cattle, sheep, dogs, poultry etc.) since the dawn of human civilisation. People keep dogs, cats and other animals as pets. While pets are treated with love and affection most of the times, sometimes they are also ill treated.

Methodology

1. Conduct a survey in your village/ locality/town on animals kept as livestock or pets.
2. Observe how people treat their domestic animals and pets.
3. Observe how people treat stray animals.
4. From your observations list the kinds of ill treatment done towards each category of animals.

Objectives

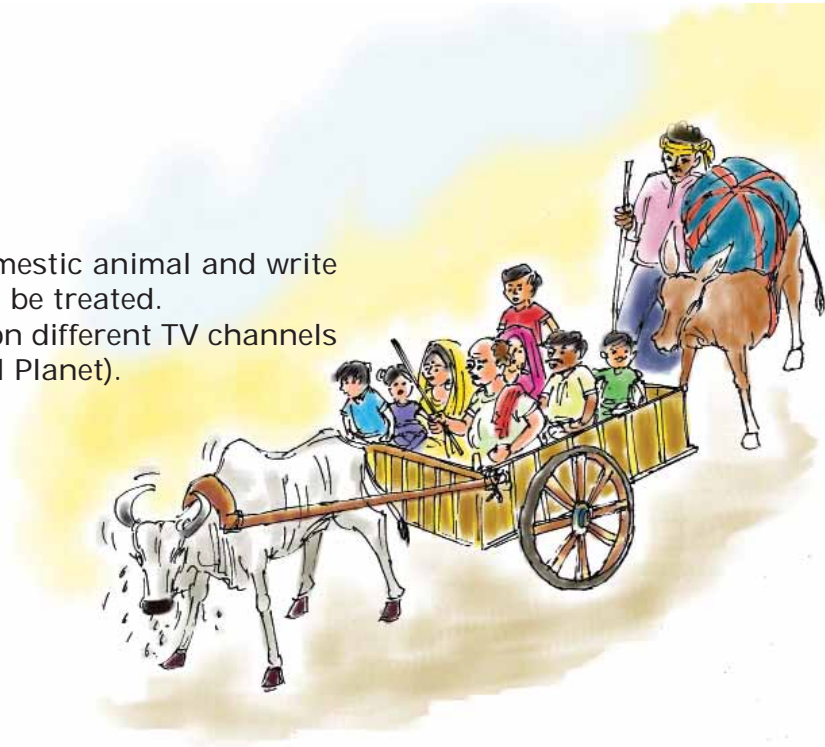
- (i) To find out how people treat domestic animals, pets and stray animals.
- (ii) To promote compassion, protection and care towards animals.

Conclusion

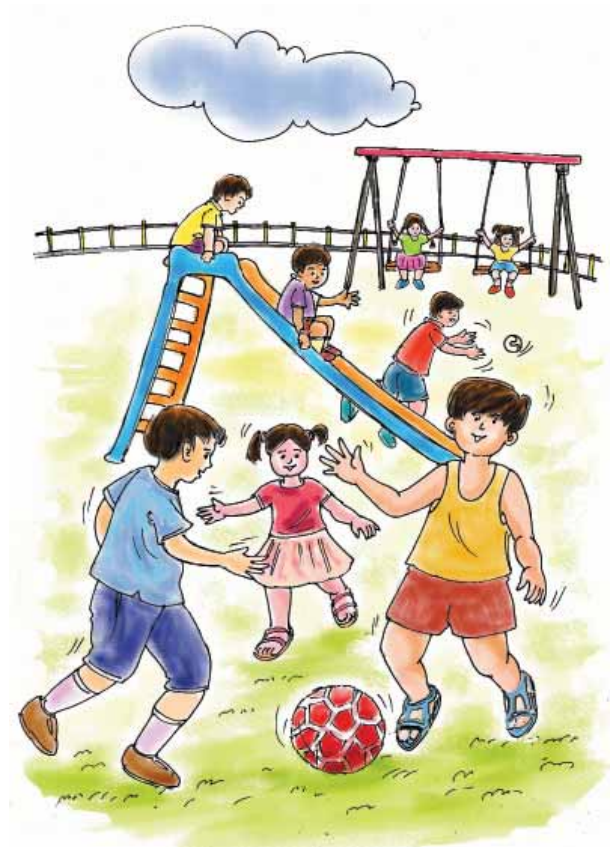
Write a report based on your observations.

Follow-up

1. Imagine yourself as a caretaker of a domestic animal and write a paragraph on how you would like it to be treated.
2. Watch programmes on animals/plants on different TV channels (Discovery/National Geographic/Animal Planet).



11. Beauty in diversity



Background

Each one of us is different. People within the same community, even children of the same family are different on many counts.

These distinct characteristics make each one of us different and unique. Physical features, tastes, habits, thoughts differ; and these differences can be seen in our daily life. This variety in interests of individuals is natural and is to be appreciated. We should not expect others to be like us.

Methodology

1. Observe in your classroom how each one of you is different.
2. Collect information based on the following:
 - (a) Physical features
 - (b) Interest for different sports/games.
 - (c) Interest for different subjects.
 - (d) Preference for different food items.

Objective

To appreciate the diversity of interests and preferences among individuals.



- (e) Difference in hobbies – reading, gardening, music, etc.
- (f) Languages they speak, places of worship they visit.

Conclusion

Present the information you have collected in the form of a report.

Follow-up

- (i) Prepare a chart/cartoon depicting the beauty in diversity.
- (ii) Imagine a world with people with same type of features, wearing same clothes and you a part of it. Write a story on it.

12. Sharing space



Background

Different animals depend on each other in many ways. It may be interesting to study some aspects (elements) of interdependence within a small region like a house, a kitchen garden or a park. It can help learners to find some of the ways in which different animals depend on each other.

Methodology

1. Make a list of all animals that share living space with you in your house. Your list may include pets like dog and cat, cattle and poultry, wild creatures like rats, lizards, cockroaches, houseflies, ants, moths, bedbugs, mosquitoes and the like.
2. Although you or your family members do not feed any of the creatures, other than pets and livestock, find out how and from where do they get their food.
3. Collect the following information in the given table about as many creatures as possible that are living in your house.
(a) What do they eat?

Objective

To study the interdependence among different creatures in a house.

- (b) Where do they take shelter?
 (c) When are they most active – during the day or at night?
 (d) How do they protect themselves from those preying on them?

| Sl. No. | Name of the creature | Food | Shelter | Active in day/night | Mechanism of protection |
|---------|----------------------|------|---------|---------------------|-------------------------|
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| 5. | | | | | |

4. Which of them feed on plant products like wheat flour, rice, pulses, vegetable wastes, sugar, tea leaves, etc.

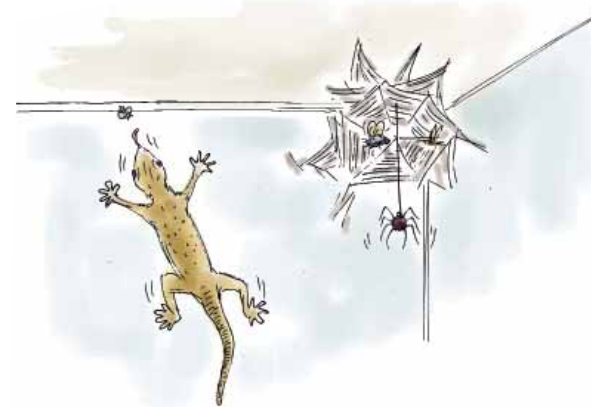
Note: The methodology presented for the above can be modified for different types of surroundings.

Conclusion

Based on the information collected by you, prepare one or two food chain(s) showing the position of different types of creatures found in the house.

Follow-up

Prepare charts showing food chains.



13. Importance of terrace farming

Background

A terrace farm is a levelled section of a hilly cultivated area, designed as a method of soil conservation to slow or prevent the rapid surface runoff. Often a hilly land is changed into multiple terraces, giving it a step-like appearance. This form of land used for agriculture is prevalent in many countries including India.

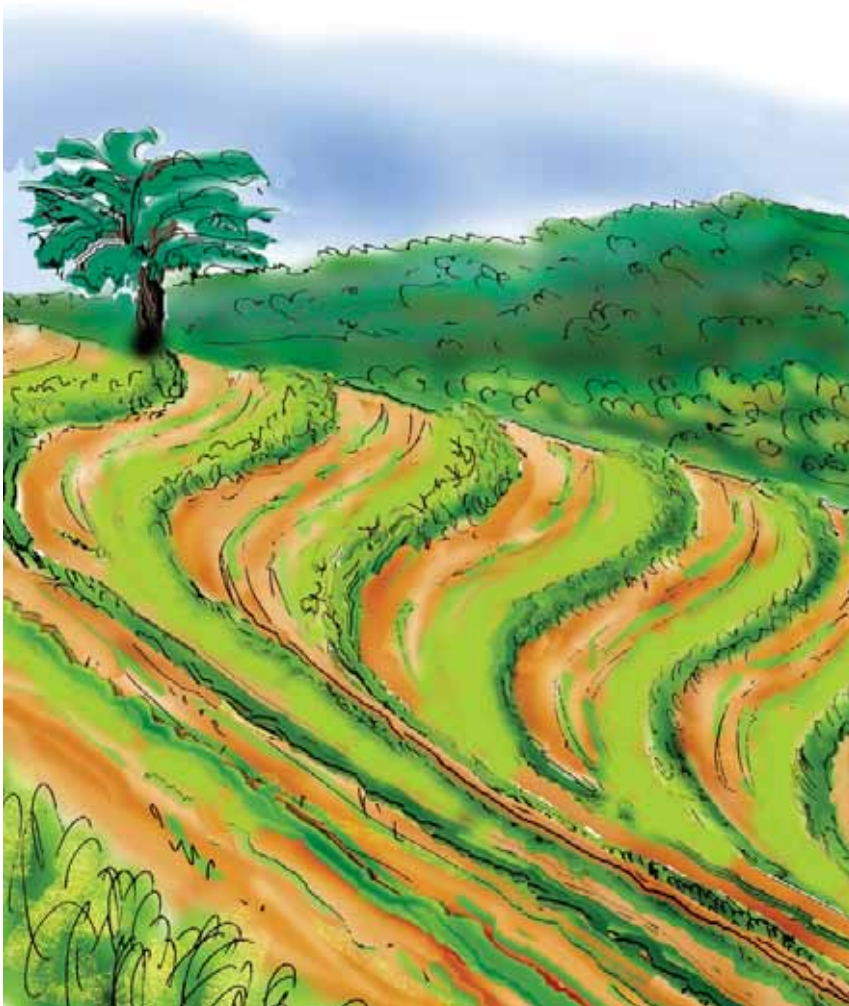
Methodology

This project could be done only in those areas where terrace farming is practised. Visit a terrace farm and ask the farmers and workers questions such as:

1. How do they make the terraces?
2. How do they maintain the terraces?
3. What measures are adopted to check the flow of water from fields?
4. What kind of crops do they grow in their fields?
5. How many times do they cultivate these crops during a year?
6. Is their produce consumed only by their family?
7. Do they have a surplus for selling in the market?
8. What difficulties do they face in terrace farming?

Objectives

- (i) To know the process of terrace farming.
- (ii) To understand how it helps in retaining water in the soil in steep slopes of hilly areas.
- (iii) To understand how terrace farming helps in preventing soil erosion.



Conclusion

Based on your study write a paragraph about terrace farming.

Follow-up

1. Make similar kinds of study for other forms of farming.
2. Find out the impact of terrace farming on the environment. You can get this information from newspapers, magazines, the internet, books, etc. or through interactions with your teachers and elders.

14. Development of urban slums



Background

A slum area is an over populated urban area with sub-standard housing, hygiene and sanitation. Slum dwellers generally do not have access to clean water, electricity, sanitation and other basic services.

Methodology

1. The class can be divided into groups for the project. The groups can visit nearby slum area and observe the surroundings. Each group will visit ten households and get information from them by asking questions like:
 - (a) How long have you been staying here?
 - (b) Where did you live before you came here?
 - (c) What was the place like where you lived earlier?
 - (d) Why did you come here?

Objectives

- (i) To find out why slums come up.
- (ii) To understand the living conditions in slums.

- (e) How many members share the place where you stay?
- (f) How many children go to school?
- (g) How many people are working in your family?
- (h) What work do you do?
- (i) How many of you can read a newspaper?
- (j) From where do you get drinking water?

2. Also note the methods of waste disposal, drainage and types of toilets.

Conclusion

Tabulate your information and prepare a small report.

Follow-up

1. Suggest measures to improve the living conditions of slum dwellers.
2. Draw a picture of the slum area with the human as well as other phenomena you have observed during your visit.

There are about 52,000 slums in India with Maharashtra having the highest number of them (approximately 16,640).

15. Exploring historical objects and places



Background

In history an object assumes importance when we understand its value in the past. Careful observation of historical objects can help us unfold many secrets of the past. It could be a ceramic pot, painting, and a piece of jewellery, sculpture or textile. Children too can discover some hidden or unknown information about a historical artefact.

Methodology

1. With the help of elders and teachers identify historical objects in your neighbourhood. These may also include buildings, paintings, places of worship, furniture, coins, fabrics, wood carving and tools.
2. Select one or two of the historical objects identified by you.

Objectives

- (i) To focus on different aspects of a historical object or place to know the past.
- (ii) To appreciate the value of heritage.

3. Collect the following information about the selected historical objects.
 - (a) Find out how the object was used in the past. Are similar objects in use today?
 - (b) What material and tools were used to make the object? Was it made by hand or with tools?
 - (c) Is the object damaged or worn out? If so, what could be the possible reasons?
 - (d) If possible try to find out who owned or used it.
4. Draw a picture of the object or take photographs.

Conclusion

Prepare a brief historical account of the object.

Follow-up

1. While collecting the above information you may try to look for similar kinds of objects used in your day-to-day life and make connections, so that you can understand how things developed over time or stayed the same.
2. Form a group and go for a nature walk/a heritage walk. Make a map of the area.
3. What is the oldest object with your family such as a vessel, a piece of furniture, jewellery, clothes, photograph? Who did it belong to? Find out the history of the object.



16. Knowing about cave art



Background

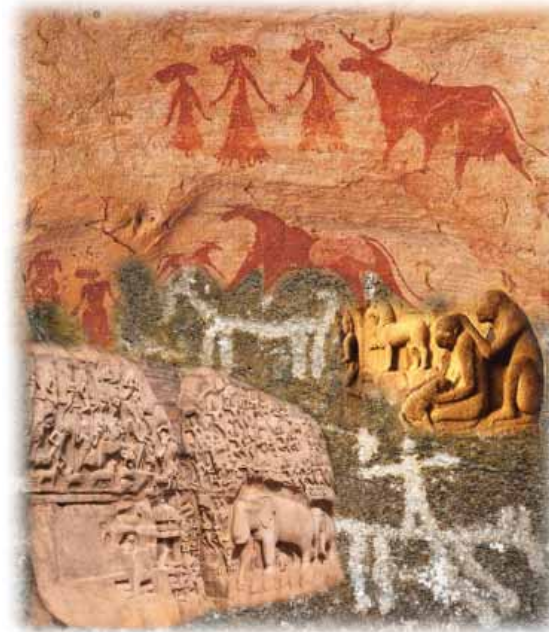
The earliest form of the art, which has survived, is often referred to as cave art. Cave art has been found the world over including India. Some places where cave art is found in India are Bhimbetka and Bagh caves of Madhya Pradesh, Ajanta and Ellora in Maharashtra and Mahabalipuram in Tamil Nadu. This type of art typically depicts shapes of animals, but also includes human figures, weapons and symbols. This art is one of the important tools for learning about the past. Many scholars believe that the feelings of the creators of cave art are reflected in their works. Therefore, cave art is living, and it has a spirit. Whatever our response to or interpretations of cave art may be, it stimulates our thoughts and imagination. Cave art can mean something different to each person who ponders over it.

Objectives

- (i) To understand the significance and purpose of cave art.
- (ii) To interpret human and animal motifs in cave art.
- (iii) To develop skills of observation.

Methodology

1. Collect pictures and photographs of cave art from books, magazines, newspapers, the internet or other sources and select your favourite. Or visit a place known for cave art.
2. Collect the following information about the selected cave painting/sculpture.
 - (a) What kind of painting/sculpture is it? What is special about it?
 - (b) What types of tools and materials might have been used by early man for cave art?
 - (c) Which type of colours were used in cave art?
 - (d) What is the artist trying to depict? What does the presence of animal figures, if any, signify? What does it tell you about the life of the people at that time?



Conclusion

Prepare a brief report about the cave art selected.

Follow-up

1. Try to visit, if possible, some of the places where you can find cave art and recreate the paintings in your notebooks.
2. Write about your feelings and reactions when you visited the place where cave art is found.

17. Exploring community craftspersons



Background

Pottery, woodcarving, glass work, metal work, weaving are some examples of crafts which require specific skills. A craft is a skilled trade.

India has a wide variety of traditional crafts. A large number of persons are engaged in various crafts.

Objectives

- (i) To be aware about local crafts.
- (ii) To appreciate the skills of the craftsperson.

Methodology

1. With the help of elders and teachers identify some crafts popular in your city, or village.
2. Select any one of the crafts that interests you and locate a craftsperson skilled in that particular craft.
3. Collect the following information about the craftsperson and his or her craft by asking questions such as:
 - (a) How did he or she learn the craft?
 - (b) How long has he or she been practising the craft?

- (c) Write the step by step processes involved in making the finished items. If you have a camera, take photographs of the entire process.
- (d) Collect information about the tools and the materials used for the craft.

To collect more information about the craft you can look for learning material in the school library and crafts museum also.



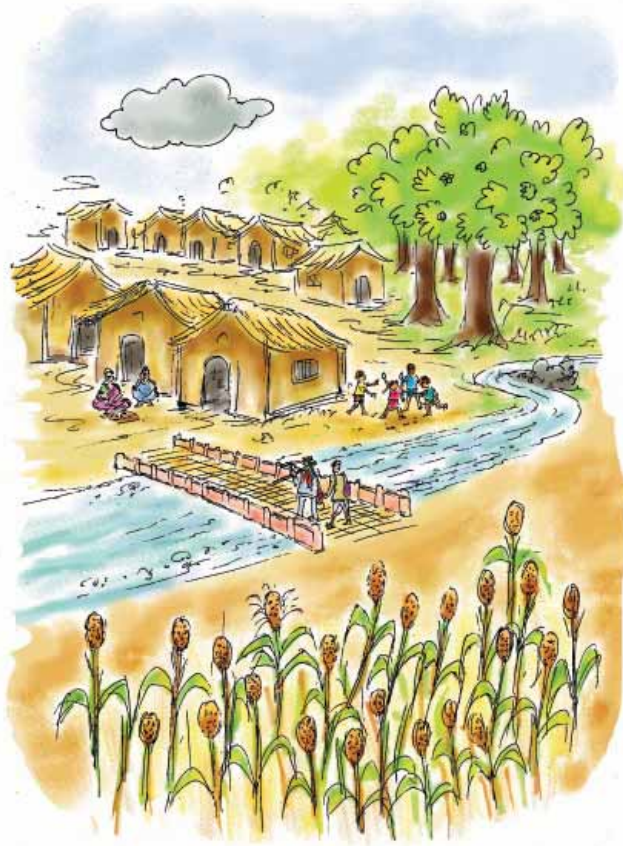
Conclusion

Prepare a brief report preferably along with paintings/ diagrams/photographs.

Follow-up

1. Try your hand in the chosen craft to get a better idea of the skills required.
2. Try to find out whether the families involved in that craft are now going for other occupations. If so, why?

18. Exploring the history of a village or a city



Background

Every village/city, whether small or big, has a past. Many present features reflect the socio-cultural traditions and customs of the past. It may be interesting to prepare a brief historical report on the village/city by collating information from various sources.

Methodology

1. Collect the following information about your city/ locality/village from elders or local museums or district board or municipality office:
 - (a) When was it established and who established it?
 - (b) How did the village or city get its present name?
 - (c) What are the major occupations of the residents and how have they changed over the years?
 - (d) Has it witnessed any major calamity like an

Objective

To prepare a brief history of one's own village/city.

earthquake, floods, fires, and epidemics in the past? If yes, show how these have affected the village population.

- (e) How does the design of old houses/buildings differ from those of the present times? Has there been any change in the material used for construction? How did the design of houses in the past suit cultural and family functions?
- (f) If possible procure copies of old paintings/pictures showing the layout of the city or village and compare it with the present one.

Conclusion

Prepare a brief write up on some historical aspects of your study.

Follow-up

1. Put up the information that you have collected on the school bulletin board.
2. Some of the facts about old buildings or monuments unravel historical facts. Collate that information.
3. Find out the factors which are damaging monuments and old structures in your village or city.



Objective

Background

Methodology

Select a renowned personality belonging to your village/town/city/region and collect the following information from elders, libraries or local newspapers with respect to:



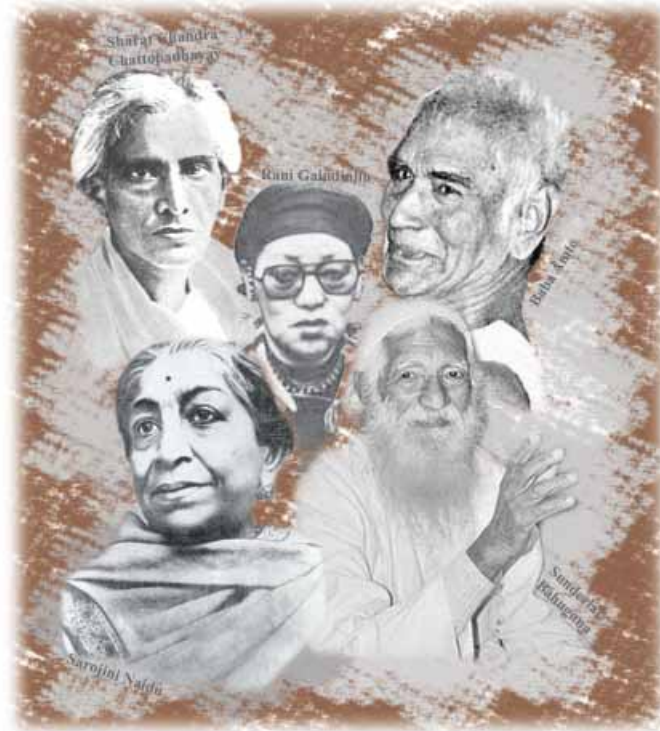
1. The name of the personality, date of birth (or period when she or he lived), locality in the village/city where he or she lived.
2. Family background including names of parents, spouse and children.
3. Main area of work and its impact on society including at the local level.

Conclusion

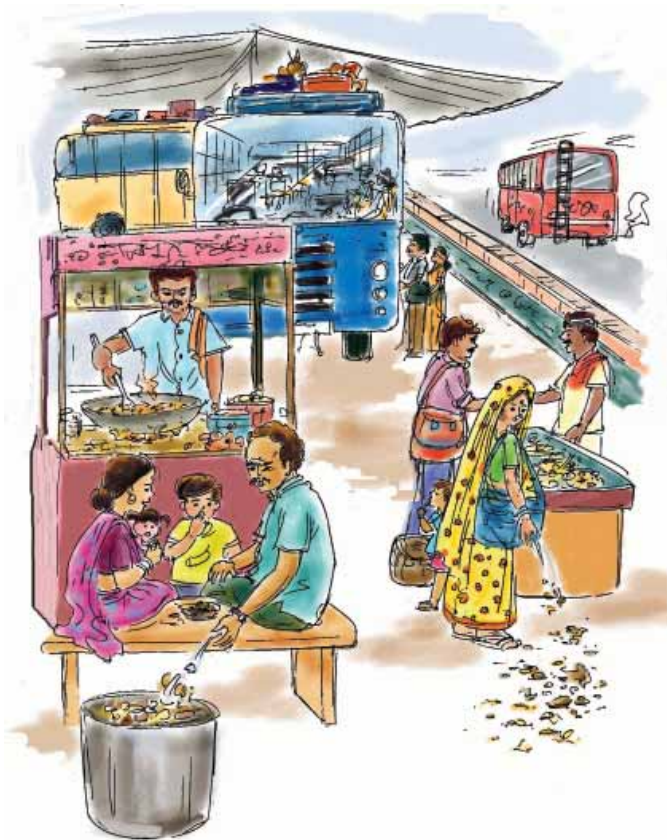
Based on the collected information prepare a brief historical write up/biographical sketch.

Follow-up

Put up the information that you have gathered on the school bulletin board.



20. Let's keep our surroundings clean



Background

It is often seen that irrespective of their education, place of work or any other social factors people lack the basic civic sense of keeping their surroundings clean. Littering is a common sight despite the fact that waste bins are being installed in all public places to avoid this menace.

Methodology

1. Go to a railway station or a bus stand or the school ground during recess or sit near a banana vendor.
2. Observe what people eat and how they dispose of the left overs.
3. Record your observation of about 50 people.

Objectives

- (i) To develop healthy habits of keeping the environment clean.
- (ii) To be morally responsible for the upkeep of one's surrounding.

Conclusion

Conclude your observation by preparing a report.

Follow-up

1. Suggest ways to spread awareness to keep the surroundings clean.
2. Display posters and stage a street play in your locality to spread awareness about keeping the surroundings clean.
3. Do a litter count in your school. Record your finding on a board for one week. (This can be a group activity of a class).

Today, heaps of waste are scattered even on the highest slopes of Mt. Everest and in the Ganges and Yamuna rivers.

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Notes

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