

SOC-RE

EDU-049

Project Eco-School

"A step towards sustainable village development through educating students"

Period of the Project

1 year

(June 2009 to March 2010)

Submitted to:

Ecological Society, Pune

Submitted by:

Ms. Sandhya Rajeshirke

Ms. Bhavana Sutaria-Shah

Submitted on:

May 15th 2010

Eco-School concept is originated
by Shri Prakash Gole.

His aim was to establish a Institute
which will organise Eco-School to
Eco-University; syllabus & course.

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The Aims and Objectives of the Project

About the project area and the schools where the project was carried out

Problem Statement and core issues

Methodology

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Activities Conducted by the Project

Paryavaran Malotiya

Results and conclusion

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Feedback of students

Future Plans

Some photographs

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Acknowledgement

We would like to thank Ecological Society for giving us an opportunity to work in two schools at Khechre.

We thank Prof. Prakash Gole Sir, for his valuable suggestions and guidance that he provided during the entire year.

The administration support as and when required at Ecological Society helped in the fulfillment of the project satisfactorily.

It was impossible to carry out all the activities without support of our colleagues and past students of Ecological Society. Our special thanks to Mrs. Rajashree Gawde and Ms Janhavi Kale to support us in projects as well as other activities for "Paryavaran Mahotsav".

We also would like to thank the Principal and teaching and non teaching staff at both the schools: Jilhaparishad High School Khechre and Appasaheb Dhamale Madhyamik vidyalay, Khechre, for granting one period each week to share our knowledge and activities with the students.

And lastly but not the least, we thank all the students of the schools for such a great enthusiasm and participation in various activities and programmes that we conducted throughout the year.

Introduction

Aim of the project:

To get an experience regarding problems of the village students and the teachers regarding environmental education; to make teaching of this subject more effective. This could be a small step towards Gole Sir's concept of Eco-School

Objectives:

- 1) To make children aware of their natural surroundings
- 2) To collect the database of traditional knowledge from students and villagers. Through this, explain and emphasize the importance of their natural resources
- 3) Achieve overall development of the child through this subject

About the Project Eco School:

Eco-school is essentially an interdisciplinary system of education. The traditional division of knowledge into different subjects – each a complete discipline in itself- is not adhered to. Life on this planet is treated as a whole & efforts are made to understand how organisms live in their environment, how human beings in different parts of the world have evolved, adapted themselves to their environment and compelled the environment to undergo change.

The whole focus is to impart a holistic view to students where his/her self-interest is subject to restrictions imposed by nature and the society. Liberty for him/her is a system of restraints. The three cardinal principles on which this system is based are:

- Human beings should respect general and particular restraints imposed by nature
- Human beings should respect the right to life of all non-human beings- be it plants or animals.
- The current generation of human beings should safeguard the interests of future generations.

About the Project Area:

- Name of the District : Pune
- Name of the Taluka : Mulshi
- Name of the village: Khechre
- Schools with levels:
 1. Zilha Parishad School, Khechre (Std. 5 to 7)
 2. Appasaheb Dhamale High-School (Std. 9 and 10)

Mulshi Taluka is to the west of Pune. It is famous for the Mulshi dam which has a hydroelectric power station. As we move from Pune to Mulshi dam, we find a no. of small roads bifurcating from both the sides, almost reaching the foothills of the Sahyadris. These roads connect to small villages. Khechre is one such small village. The main occupation of the people is agriculture.

This village has got one Zilha Parishad School (Std. 1 to 7). This is one of the 10 schools of the Kondhavale centre. The village also has got one high school, Appasaheb Dhamale High School, which is run by a private educational trust, "Mulshi Dharan Vibhag Shikshan Mandal, Male." Students from surrounding 10 villages come to this school

We had selected three levels:

Level	No. of students
Std. 5 to 7	45
Std 9	58
Std. 10	47

Selection of Project Area – A Rationale View

The identified village is near Pune, thereby increasing the possibility of the area undergoing a kind of development that is mostly seen in villages close to industrialized, cosmopolitan urban cities – haphazard, hampering its environment and natural resources and with a considerable loss to biodiversity. The village has good rainfall (avg. 1000mm) and is a part of Western Ghats, having possibility of good biodiversity (which needs to be surveyed). It is therefore important to sensitize the people towards a more holistic development that is in-line with their landscape and environment, followed by the villagers.

The village is about 35 kms. from Pune, making it logistically easier to manage.

Problem Statement:

Though Environmental Education has been made compulsory at various levels in schools and colleges, it has not been effective as it doesn't cater to its relationship with other subjects and to peoples' daily needs. Moreover, fringe villages (villages near cities) are

losing their relationship with their land. The education system of the cities is thrust upon the villages making it imperative for people to move into cities or transform the development of the village on the pattern of the cities.

Core Issues:

- Environmental conditions and problems are area specific (Though they have national and global scale as well.). But today's education as well as text books have generalized this subject to such an extent that students can not relate it with their local area. For e.g. the students in Khechre village, are very rarely exposed to industrial and vehicular pollution and are only partially aware of its consequences. Students can not relate it with their daily life and associate it with any other aspect of their life other than its immediate direct impact on health. Moreover, pollution as a topic takes predominance over other major issues that govern their lives. So there is a need to not only touch upon the mandated curriculum but also include and stress topics of local relevance in the education.
- The availability and application of local knowledge as well as a holistic approach to this education on a sustainable basis requires training, networking and capacity building. There is a significant lack of training for teachers who teach this subject and is currently taught by any teacher who specializes in History, Geography or Science.

With such a background, we at Ecological Society, decided to take an initiative to reach the villages. Being experienced in Environmental work for past 28 years, we wanted to share this information to teachers and the students of the villages.

.Methodology:

As already mentioned, we had selected 2 schools for our work at Khechre. A Zilha Parishad School and a high school, run by a private trust.

The 4 members of Ecological Society, decided to visit these schools and share our knowledge with the students. After having a talk with the school teachers, we were allotted one lecture each at Zilha Parishad School, one lecture for std. 9 and one lecture for std. 10.

In total, we made around 25 visits to these villages.

We had planned activities according to the level of the students, their locality, season etc.

Activities conducted throughout the year

Activity	Details	Message given	Level of success
Poems/songs	Rain song	Observations of changes that are observed in environment, biotic as well as abiotic during rainy season	Good
	A poem on weaver bird, with demonstration of the bird's nest	Unfolding of wonders of nature in the form of intricate nesting habits found in birds. This was followed by collecting some information of birds from surrounding areas	Good
Do and Learn	Human Evolution	Importance of thumb, straight posture and brain development in human evolution	Good
Demonstration	Available water for drinking	Distribution of water on Earth Surface	Satisfactory
Survey	Forest food	To generate interest and emphasize the importance of local knowledge	Good
Discussions	Festival celebration	Same as above	Good
Book reading	Book of snakes	Importance of snakes and correcting their misunderstandings about snakes in general	Good
Discussion, reading and explanation	For std. 9 and 10 text books	Understand the concepts in ecology for std. 9 and 10	Good
Reading news paper articles	Biodiversity and its importance	As a reference to emphasize the diversity of different crops and varieties cultivated in their farms	Good
Nursery	Seeds of native trees	Understanding the importance	Satisfactory

development	were distributed among the students	of native plant diversity	
Plantation	Plantation of native plants and managing them in the school campus	Understanding of the importance of native biodiversity	Satisfactory
Reading, discussion and comprehension		Ecology and Environmental Science in other text books	Good
Group discussion	Discussion on displaced people due to developmental activity like dam	The interdisciplinary nature of subject environment e.g. social, economic, cultural, political etc.	Good
Case Study	Pollution caused by project (A roadside eatery is "Dhaba", is the only project in their vicinity)	Social and Environmental effects of a commercial project	Good
Survey and importance of native vegetation	Names and locations of native trees and associations of vegetation	Importance of native species over exotic	Satisfactory

Paryavaran Mahotsav

In order to increase the involvement of the students, teachers as well as the decision makers in the villages, we had organized a "Paryavaran Mahotsav" a three hour festival at the high school.

Method:

The whole activity was divided into 2 parts:

- 1) Cultural activities related to Environment
- 2) Presentation of projects by the students of Std. 9

Around one month was spent on the preparation for this festival.

The Programme

Cultural Activities

- 1) We asked students to take an oath for protection of the biotic as well as the abiotic environment present around them
- 2) The Paryavaran Mahotsav was organized on 30th January, i.e. the death anniversary of Mahatma Gandhi. On account of this occasion, some thoughts regarding the village development put forward by Mahatma Gandhi were discussed.

- 3) These villages fall in the Taluka Mulshi. As already mentioned, Mulshi taluka is famous for the dam that has been constructed. During the British times in 1920s and 30s, an anti dam movement took place in taluka Mulshi under the leadership of, Senapati Bapat. This historical and social perspective about a developmental project like dam was shared with the students.
- 4) Students presented two group songs, one a science song and the other one explaining the natural beauty of the villages
- 5) This was followed by a talk by Prof. Prakash Gole and the feedback of the students.

Project Presentations

From the topics given below, one will know that the selection of the topics were such that it provokes the thinking of children towards the natural resources found in their villages and towards other environmental problems like waste management.

Each group of students was asked to prepare an invitation card for this festival to be given to the Sarpanch of the villages. We had also organized a competition of Slogans for the groups

The topics for the projects were:

- a. "Nirmal Gram Abhiyan"
- b. The genetic and Species diversity found in the farms of their villages
- c. Forest Food which is used in the villages
- d. Waste generated in the farms and their management
- e. The population survey of the village
- f. Waste production through other small scale businesses that are practised in the villages
- g. Management of these wastes

Please see the power point presentation for more information on Paryavaran Mahotsav

Feedback of the students

A written feedback was obtained from the students:

Following questions were asked to them:

- 1) Was this year-round activity proved beneficial to you?
 - a. Very useful
 - b. Moderate
 - c. Little
 - d. Not at all
- 2) If yes, how?
 - a. We have become aware about our surroundings
 - b. Increase in our confidence
 - c. We enjoyed
 - d. Our perspective of looking towards nature has changed
- 3) Should we conduct similar activities for the next year?
 - a. Yes
 - b. No
- 4) Any suggestions for the better running of the project?
- 5) How can you as a student contribute for the sustenance of this activity?

Student's response:

- 1) Almost all of the students have said that this one year activity was moderate to very useful for them.
- 2) This activity has helped the children to change the way they look at nature. At the same time it has made them more aware of their surroundings and increased their confidence
- 3) All the students have said that we should continue this kind of activity for the next year
- 4) Suggestions given by them:
 - a. More out-door activities need to be included
 - b. More games need to be taken
 - c. There should be more action than just theoretical study.
 - d. Increase the frequency of these classes
- 5) Students have jotted down their ways of contribution towards the sustenance of this activity:
 - a. We will keep the balance of nature
 - b. We will manage the waste properly
 - c. Construct toilets
 - d. We will help in the awareness creation programme of this subject with you
 - e. We will help in teaching this subject in other schools (std. 1 to 7)
 - f. Would like to participate in the activities of your organization
 - g. We will find out the food chains found in our villages

Results and Conclusions

At the end, we would like to say that this one year activity was fruitful. As one can see from the reports, the kind of activities and the projects that were given to the students helped to successfully satisfy the objectives of this project.

As we have got some points from students feedback, we can definitely make certain improvements in our efforts for the next year such as:

- 1) Proper planning of the activities
- 2) More action based projects
- 3) More field activities
- 4) Need to create a scope for the students to get involved in environmental problem solving at local level at a slightly larger scale

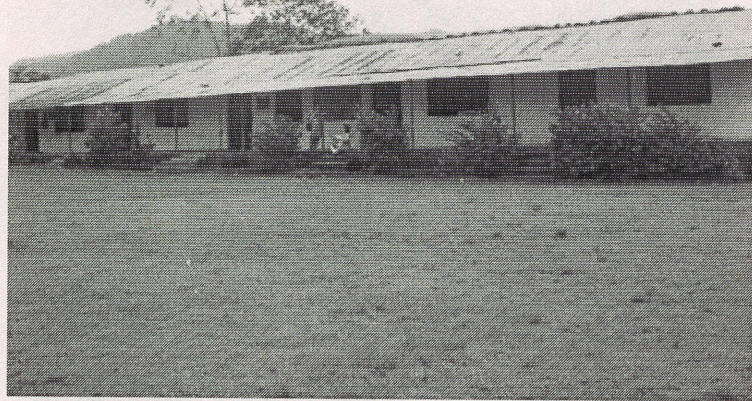
Future Plan:

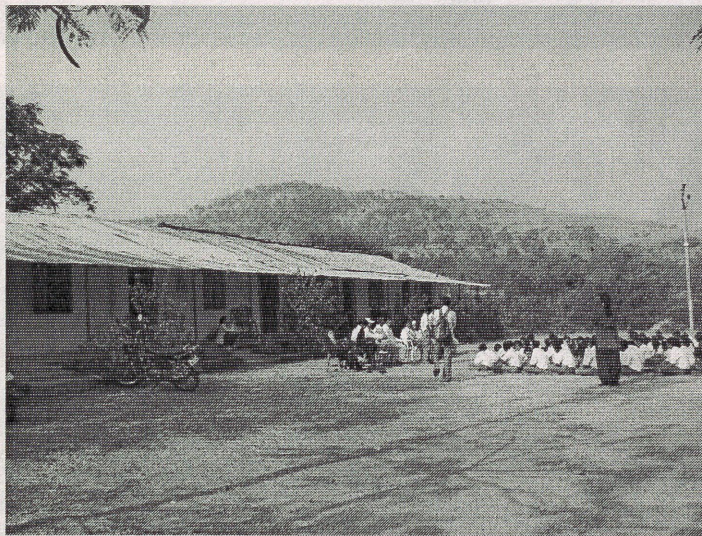
For next year we would like to cover the 5th to 7th std. students of the entire Kondhawale Centre, which includes 5 schools.

Besides, we are also planning to conduct teacher training programmes for all the teachers of this centre.

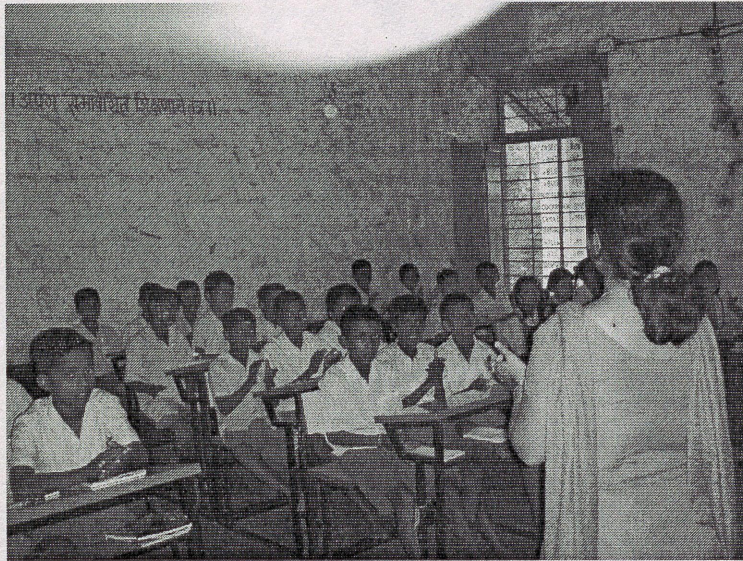
For this, we have already started planning a yearlong programme..

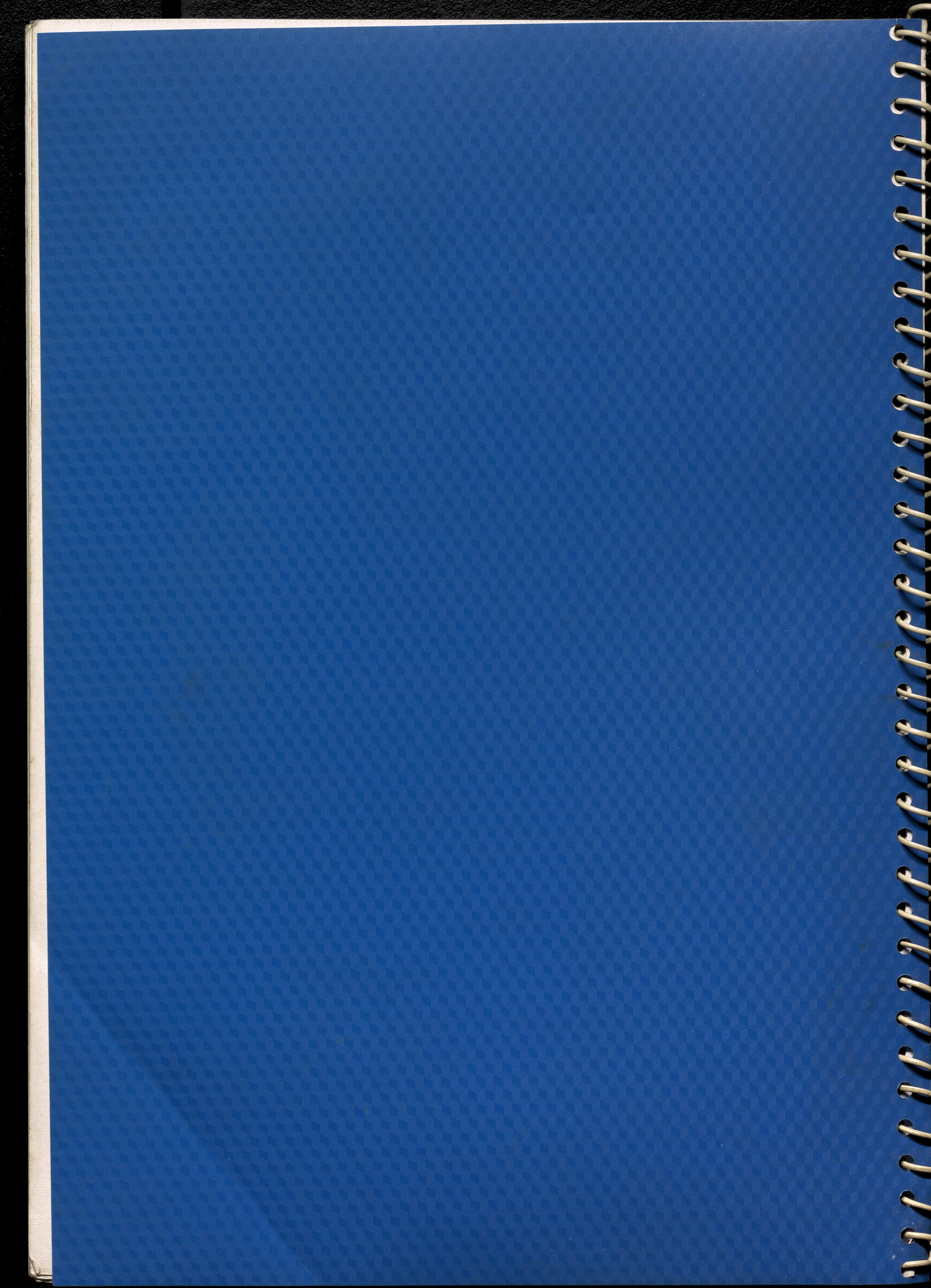
This activity will continue irrespective of availability of funds.











Orientation Programme for Educators
Eco-School to Eco-University

11-4-2010

→ Prakash Gole

शिक्षण धारेमध्ये माणसाचा विचार व्हावा, विषयांचा नाही.
पर्यावरण हा जगण्याचा विषय आहे.

माणसाच्या आयुष्याचे २ टप्पे असतात -

१) निसर्ग २) अर्थव्यवस्था

या दोन आंगांमध्ये परस्परसंबंध असणे आवश्यक
हे Gaia hypothesis सांगतोच.

अर्थव्यवस्था मक्की dominant आहे की ती physical
आणि Biological environment वर बर्चस्व
गाजवत असते.

कुठल्याही audience ला या दोन्ही गोष्टींचा आकलन
होण्याची गरज आहे.

शहरांमध्ये निसर्ग कुठला ?

साध्या उदाहरणांमधून मुलांना निसर्गाजवळ जाता येईल.

निसर्ग मुलांपर्यंत पोहोचवणे आवश्यक

निसर्गविषयी कुठल्या वोटेल अशा activities द्याव्यात.

उदा. झाड किंवा प्राणी Environment मध्ये कसे
जगतं हे आजची शिक्षणप्रणाली शिकवत नाही.

मुलांचं लक्ष वेधणं गरजेचं.

निसर्गातील चमत्कार मुलांना आवले पाहिजेत.

→ धरणांचा नदीवर काय परिणाम होतो ?

→ डोंगरांमुळे काय फायदा होतो ?

→ नदी ही जिवंत परिसंस्था आहे

अशा उदाहरणांमधून मुलांना निसर्गाच्या जवळ
नेता येईल.

→ Compartmentalizedⁿ कमी वेईल अशा तऱ्हेनेच
मुलांना शिकवता आले पाहिजे.

→ T.V. आपणही मुलांवरिबर बघणं गरजेचं.

कारण त्यातून मुलांच्या मनावर प्रतिमा निर्माण होत असतात
त्यांना अनुसरून आपल्याला काही गोष्टी कराव्या लागतील.

- दुर्दैवाने निसर्ग हा शिकान्याने पाहिलेला असतो.
- पक्षी बघण्याचा छंद जोपासणं गरजेचं - गंगमत बरे
- ऋतूबदल आणणं महत्त्वाचं.

म्हणून Monoculture - Fencing

झाडांचा उज्हाळा वेळेवेगळ्या वेळी सुरू होतो.
काहींचा सुरूच होत नाही.

- काही realities ची जाणीव करून देणं महत्त्वाचं.
त्यांना अर्थव्यवस्था असे मोठे शब्द कळत नाहीत.
आज्या - exotic, indigenous.

बाजूच्या प्रदेशावर आपण अवलंबून असतो.

म्हणून आजूबाजूला जे काही चालतंय तिथे
शहराचं लक्ष असावं.

जिथून आपण होतो, त्याची परतफेड आपण
करायची असते.

शहराची व्यवस्था करायी चालते ह्याची जाणीव
करून दिलीच पाहिजे.

आपण जी २४ तास electricity वापरतो, त्याची
मरपाई केलीच पाहिजे.

- पर्यावरण शिक्षणामध्ये हा विवेक आलाच पाहिजे

Goal of Env. Educatⁿ - विवेकी उपभोक्ता
निर्माण करणे.

Industry - किती वापरायची? - विवेक
छोटे surplus

- मुल्यांना Listing करायला सांगायचं.

इपाय काय?

शेतीकडे मुल्यांना लक्षवायचं.

भारत हा शेतीप्रधान देश नाही.

कारण आपल्याकडे केवळ ३ ते ४ महिने पाऊस पडतो.

Domestic Biodiversity

Micro-climate.

शेतीमध्ये कशी सुधारणा झाली ?

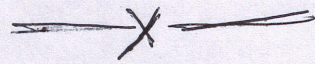
पर्यायी industry कशी असावी ?

soft technology मध्ये सुयोग्य interested करून घेऊ शकतो.

खेड्यांमधील अर्थव्यवस्था -

→ त्यांचं वस्तू त्यांच्या resources कडे वळवणं गरजेचं.
त्यांच्या मजगतीत आहे हे त्यांना जाणवून दिलं पाहिजे.

→ त्यांच्या resources ची कोळजी द्यायला पावणं महत्त्वाचं.



Right to Education

- Medini

Right to Education -

Teaching Methods

→ Bijoor madam.

→ द्यायातील कल्पनेवर मुलांचे विचार समजून घेणे आवश्यक आहे.

१) चर्चा करणे

२) शिक्षकाने दबा मोकळ्याने वाचणे

३) मुलांनी दबा वाचणे

४) दबाकड प्रश्न विचारून त्याची उत्तरं तपासणे.

अज्ञात ठेवण्यासाठी काही कल्पना शोधणे.

- मुलांना छोटे प्रश्न काढायला सांगणे त्यातून वाचन compulsory होतं.

- चुकीच्या कल्पना / म्थुपेस यांची मुलांना जाणीव करून देणे.

- मुलांना स्वतःच्या हातांनी activity करायला देणे महत्त्वाचं.

- Projects करू शकतो.



१) शाळांमध्ये Env. Educatⁿ compulsory झालं असतं तरीही शिक्षक नाहीत - आपला role काय?

२) ५ वी ते १० वी → syllabus ?

८ वी ते १० वी → syllabus ?

→ Principals training

→ Teacher's "

→ Students "

Policy decision.

Group Discussions

Group 3

Swati Dixit, Smita, Ketaki Sathe,
Malaksingh, Bhavana, Shrish & Nitin Kanitkar.

Day 1

Target Gr. → 5th to 7th 8th to 10th

Time period → 3 hrs. 3 hrs.

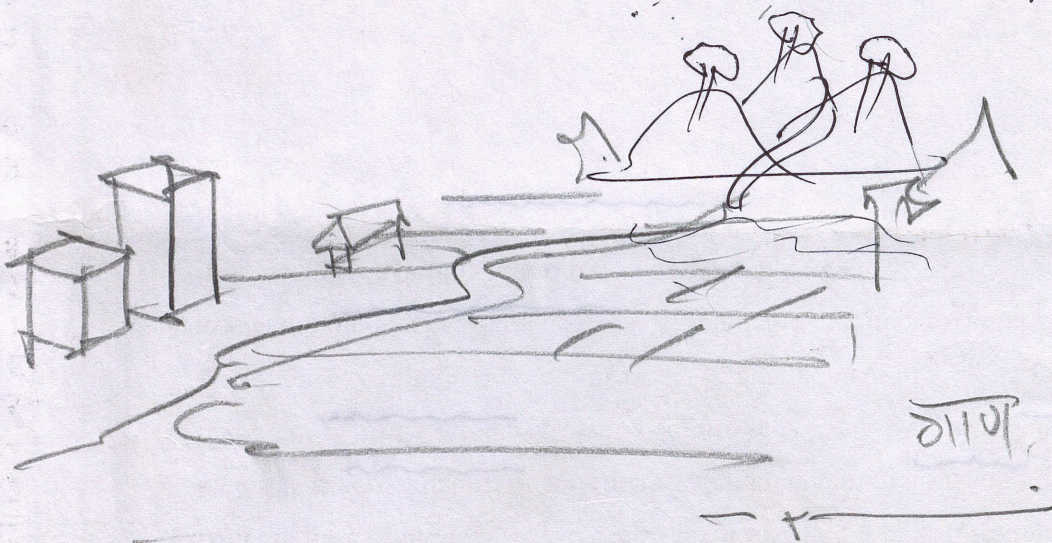
Schedule → Introduction + Ice Breaking
→ 20 min + 20 min

Model.

Intro. to model → Story → 15 min.

→ Model preparatⁿ → 1/2 तास

दगड
माती



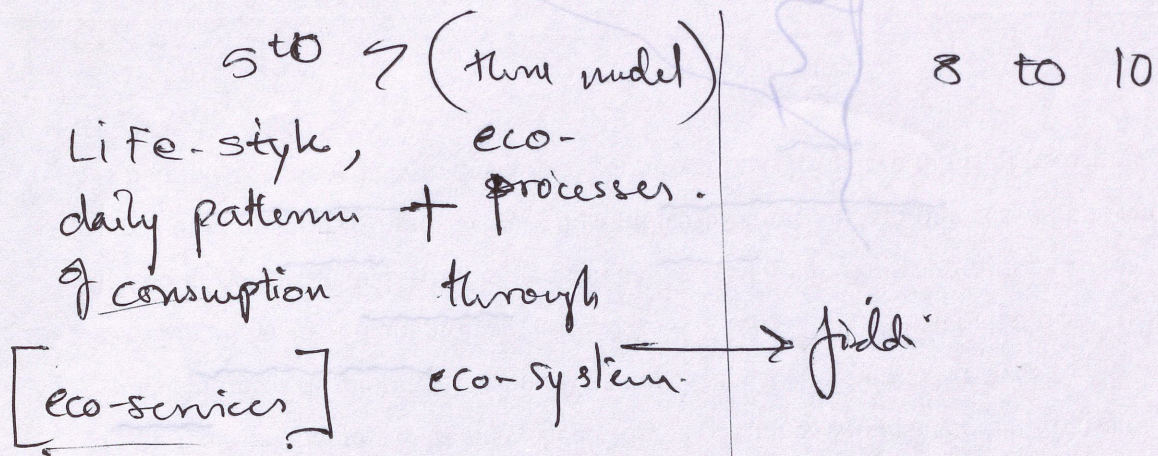
→ ~~माहेर कविता~~ → 20 min.

→ गप्पा . . . → 1/2 तास

→ कविता → माहेर . . . 1/2 तास

Back-stage
preparatⁿ

Day 2 → Orders of nature



lithosphere
hydrosphere

Day 3

Vegetation
Wildlife association

Day 4

Human
Anthropos effect

Day 5 Importance
Economy & Ecology.

(Detailed)
Economy & Ecology

Summary

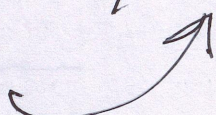
Summary

Per Day activities.

Story, Games, Songs, Play
↓
Shivaji,
Lantern

Drawing
↓
Landscape

daily pattern

- 1) संग Significance. Context
- 2) Native. landscape / Comparison with
local land
- 3) Maps; pictures. 
- 4)

Group 1.

8 ते 11
Crayons.

→ leaf margin

Day 1

12 ते 16

Tracing.

Comp- / simple

Leaf roles

→ sketch map → ~~सगळ्यांसाठी~~
preparatⁿ → living &
resources non-living things plot
identificatⁿ

→ Game - विष-शृंखला. ~~सगळ्यांसाठी~~
(Bio-magnificatⁿ)
→ बिजुर माराम.

Day 2

8 to 11

Story - गोजर्जन देव,
महाभारत / शमायणामधील
गोष्ट

12 to 16

मिसर्ग ओ लहरो.

सुखकर जीवनशैली. → अक्षरकर काका, clay model.

Discussion - Questionnaire + cross-word,
Followed by debate
home work.

गाणी - म्हालाव

Group 2

Day 1

Age Group - 8 to 11

12 to 16

Historical Perspective
&
Human Evolution.

Origin of Earth

Barter system,
How trade started?

←
story / song

→
Trade चा आत्तापर्यंतचा
प्रवास

Bird watching

←
common, nearby
birds

→
Take students little afaas.
Explain Eating habits,
beaks, feathers etc

Day 2

Food web → Food chain → web of life game

Food pyramids

परिसर वाचन

तुम्ही या विषयाचा अभ्यास कसेन पुढे काय करू शकता?

Group 3

Day 1

- ★ ग्राम्या → Introduction → Breaking the ice 5 min. act
- ★ Jabaal Rushi story
- ★ Model preparation - डोंगर, शेत, झाडी, घर इ. with the help of stones & mud
- ★ Song - माहेर

- Topics -
1. Natural resources
 2. wonders in nature
 3. story telling - पंचतंत्र / mythology
create stories on Eco-processes.
 4. Art work with fallen lvs, mud, sand etc.
 5. श्रृष्टीत गोष्टी - अनिल अवचट

Day 2 to Day 5

Day	8 to 11	12 to 16	Common activities for all days.
2	Daily resource consumption ↓ Eco Services	Native places, compare native landscape with local landscape ↓ Eco services, Eco systems, Eco processes	Use of Maps - as a source of explanation. Use of cultural knowledge e.g. - stories of Shivaji
3	Earth Format ⁿ	Earth Formation, Lithosphere, Hydrosphere	Games
4	Evolution vegetation & wildlife	Evolution, vegetat ⁿ , wildlife associations	Songs Field visits
5	Human consumpt ⁿ of resources. Appreciate Eco-processes.	Economy + Ecology conflicts & ideas for sustainability.	

Availability of resource persons

25th - Aditi, Prajakta, Nandini Devi, Vidula

8-4 weekdays - Ketaki Sathe

26th, 27th, 28th - Smita Taware

26th - Bijoor madam

25th, 26th - Nitin Kanitkar

25th - Malaksingh

weekdays - S. Kanitkar

All days - Mr. Salvi

Any 1 day - Harshal

2-3 days - Mr. Vhavale

Any 2-3 days - Sneeti Dixit

where to conduct these workshops
after Apla Ghar?

Day Care Centre - Shirish Kanitkar

Atul Nagar, Happy Colony, Dahanukar - Bhavana