

Bamboo based curriculum in rural schools

By [Azim Premji University](#) | Sep 19, 2018

Did you know that Gandhiji's beloved charkha was made of Bamboo !

Would a Nai Taleem for today for thousands of villages in India involve school children learning through productive work around bamboo ? For forest based villages like Mendha, Bamboo is a major economic resource. (Mendha (Lekha) is a small village in Maharashtra where all community related decisions are unanimously taken by the gram sabha). An estimated 8.96 million ha forest area which is approximately one third of India's forest cover contains bamboo. It grows practically all over India. Although dwindling in many parts of India due to over exploitation, Bamboo still plays a major role in the livelihood of many rural people.

What is so special about Bamboo ? : i) they are the fastest growing plants on the planet with growth rate of up to 1.2 m a day. They can therefore capture vast amounts of carbon for climate mitigation , and can quickly do "afforestation" of degraded lands ii) they are stronger than steel and so have versatile uses as building material iii) they are still sufficiently cheap and plentiful and are known as "poor man's timber" iv) they can be molded to some extent like cane to make various implements , furniture , and handicrafts v) they are very important as raw materials for making paper , plywood, particle board etc vi) their roots can reduce soil erosion by up to 75% vii) pickled or stewed bamboo shoots are regarded as delicacies in many parts of the country.

Proposed Bamboo based work and learning in school :

Class I – II – III

- Local word for bamboo
- Listing of all things made from bamboo and draw pictures
- If there are any local poems , songs , stories around bamboo , use them appropriately in class
- Write the names of all people who make bamboo products with the name of the product
- Some simple weaving work with bamboo strips (if possible)

Class IV-V

- Show all bamboo groves in a village map
- Do a bamboo census of the village or hamlet
- Find out from elders if bamboo numbers and plantations are decreasing or increasing
- Is there only one kind of bamboo grown in your village ? or there are different kinds ? If so what are their names ? How are they different ?
- Find the price of bamboo . Calculate the total value of bamboo of whole village Find the price of various bamboo products
- Make some bamboo crafts and small items suitable for this age.

Class VI-VII-VIII

- Do you deliberately plant and grow bamboos or it grows by itself ? Can you deliberately cultivate bamboos ? How would you go about doing it ?
- Measure bamboo growth rate
- Do you know if bamboo suffer from any pest attack or diseases ? If so what is done about it ?

- Do you know of other varieties of bamboos ? where do they grow ? what do they look like ? what are their special characters ? (Literature search)
- If you would like to grow a new bamboo variety in your area , how would you choose the variety ?
- Have you seen bamboo flowers ? Are there Stories around it ?
- Were there more products made out of bamboo before ? Why this change ? And now what materials are these products made out of ? why ?
- You may not have seen , but have you heard of other products made from bamboo and other uses ?
- Do bamboo propagation practical , specially with appropriate non local varieties
- Learn to make bamboo shoot dishes (if not done locally)
- Make appropriate bamboo crafts and products of daily use

Class IX-X

- Botanical classification and structure of bamboo
- Do you know about any processing or treatment that has to be done to make different uses and products of bamboo ?
- What do we mean by strength of Bamboo ? How does one measure this strength ?
- Do actual processing or treatment not so prevalent locally
- Learn to make products which are not made locally.
- Learn to do agroforestry involving bamboos.

Some Issues and Outcomes

There will be different kinds of villages with respect to bamboo : villages with forests with lots of bamboo ; villages with forest but very little bamboo or none ; villages with no forests but lots of bamboos ; no forests and very little bamboos or none ; villages with lots of degraded lands ; villages with un-irrigated single cropping lands ; villages with fairly thriving bamboo based livelihoods; villages which just sell their bamboo and do not make much products. So the actual activities will have to be contextual depending upon the above factors.

Outcome 1 : A greater understanding of various aspects of bamboo. Starting from local knowledge and expanding through literature. Learning Language, Maths , Science, Social Studies in the process

Outcome 2 : Bringing in new varieties , increasing bio-diversity and sustainability . Learn the cultivation skills and wherever possible , increase the cultivation of suitable varieties of bamboo

Outcome 3 : Learning new uses and production skills related to bamboo products and increase in livelihoods options

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Category: Teacher Development

Subject: Environmental Science

Language

Mathematics

Science & Technology

Social Studies

Board: All boards

Grade/Standard: Class 1-2

Class 3-5

Class 6-8

Class 9-10

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