

# SHRI R.L.T. COLLEGE OF SCIENCE, AKOLA

## Best Practices of Session :2021-22

### 7.2

#### Best Practice - 1

##### **Title of the practice:**

**Working with Unnat Bharat Abhiyan (UBA): A step towards sustainable development of village.**

##### **Objectives of the Practice:**

- To create a sense of social responsibility among college students.
- To acquaint the students with the rural lifestyle and to understand the problems of the villagers.
- Being a Participating Institution (PI) under Unnat Bharat Abhiyan (UBA) to involve in the process of Indigenous development of self-sufficient and sustainable village cluster.

##### **The Context:**

Unnat Bharat Abhiyan aims to link the Higher Education Institutions (HEIs) with a set of at least five villages, so that institutions can contribute to the economic and social betterment of these village communities using their knowledge base. The mission of our college is to do social work while spreading and promoting science culture in students and society. Hence, A village development plan for all the 5 adopted villages has been prepared in consultation with Honorable District Collector. To contribute in the noble work of Unnat Bharat Abhiyan, we decided to be a Participating Institution (PI) and provide helping hands for sustainable development of adopted villages.

##### **The Practice:**

- A village development plan for all the 5 adopted villages was prepared.
- UBA Coordinator of college organized Gram Sabha and mahila Sabha (Self Help Groups).
- UBA Coordinator and volunteers visited to the village school and interacted with teachers and students.
- Awareness Banners were displayed and rallies were organized.
- Cleanliness drive was conducted.
- Soak pits were prepared.
- Covid Vaccination Awareness campaign and Covid Vaccination camp were organized in village.
- Demonstration and hands on training workshops, Lectures on Biodiversity conservation were organized in village.
- Grievances of people were noted, the major problems in the area were observed and solutions were found out.

- The Base line survey of 5 villages was done by the students and the Nodal officer, UBA of the institute.

### **Evidence of Success:**

- The Seed money of Rs. 50,000/- was sanctioned and provided by National coordinating Institute, IIT Delhi for UBA Baseline survey.
- The Utilization certificate was submitted in due period and successfully going ahead for proposed project for sustainable village Development.
- Some needy students got opportunity to work under ‘Earn and Learn’ scheme for doing work of uploading baseline survey forms on Unnat Bharat Abhiyan portal.

### **Resources required:**

- Trained team leader i.e. UBA Coordinator of College and devoted student volunteers.
- Seed money
- Transportation facility
- The baseline survey forms and stationary etc.
- A healthy environment between villagers and participating institute.

**Problems Encountered:** No.

**Working with Unnat Bharat Abhiyan (UBA):**  
**A step towards sustainable development of village.**  
**Photographic evidences**

**Awareness campaign about Unnat Bharat Abhiyan (UBA) scheme** ↓



UBA Coordinator Dr. Rashmi Joshi organized Gram Sabha and mahila Sabha



UBA coordinator, while giving information to school teachers and students about Unnat Bharat Abhiyan project

**Rally and cleanliness drive in Apoti village:**

NSS volunteers cleaned the village area and convinced the villagers that cleanliness is the real key to good health. In the morning, Prabhat Feri was conducted to create awareness among the people of the village about health, environment and cleanliness. ↓





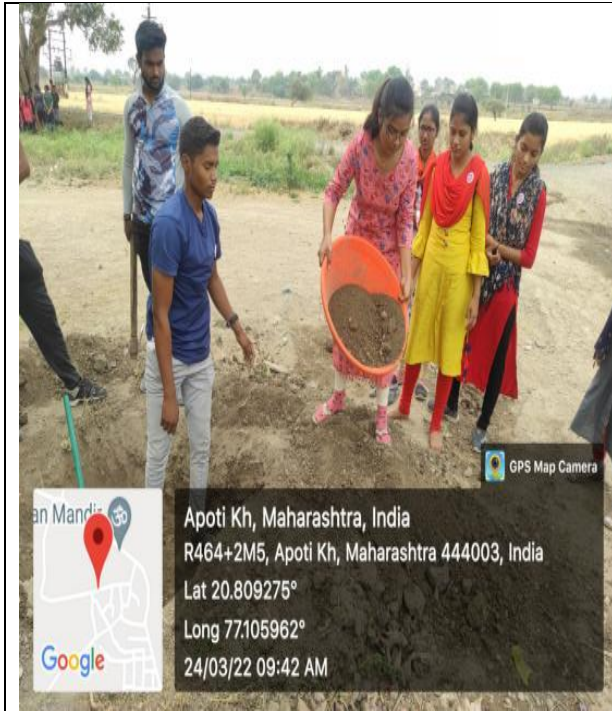


**Construction of soak pits at adopted village Apoti:**

4 soak pits were prepared at different 4 places in adopted village. Volunteers under guidance of NSS program officers dug the pits and fill them with ballast and mud. ↓





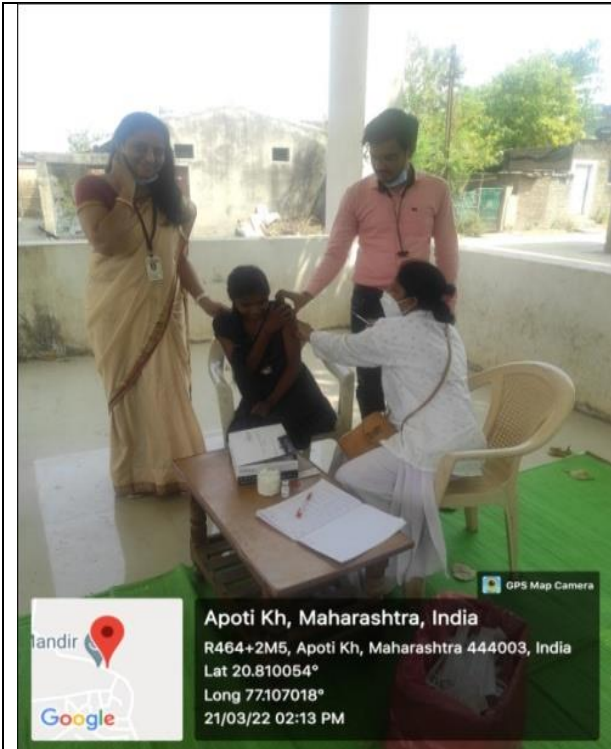



### Covid Vaccination Awareness campaign and Covid Vaccination camp

The volunteers created public awareness about Covid Vaccination by interacting with the villagers through Street plays. Covid-19 vaccination camp was organized at Adopted village Apoti.








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### Workshop and Hands on training on Making Herbal Products

One day workshop on “Making Herbal Products” to train the women from adopted village Aapoti khurd was organized by UBA Coordinator Dr. Rashmi Joshi in collaboration with Women cell of Shri R.L.T. college of Science, Akola. Hands on training was given to some of the ladies from village. Dr. Poonam Agrawal, Associate professor, Head Dept of Chemistry and Crystal Club members had given demonstration to make Herbal products.

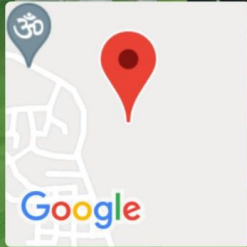



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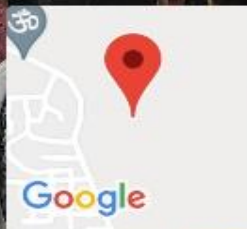




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**Lecture on biodiversity conservation**

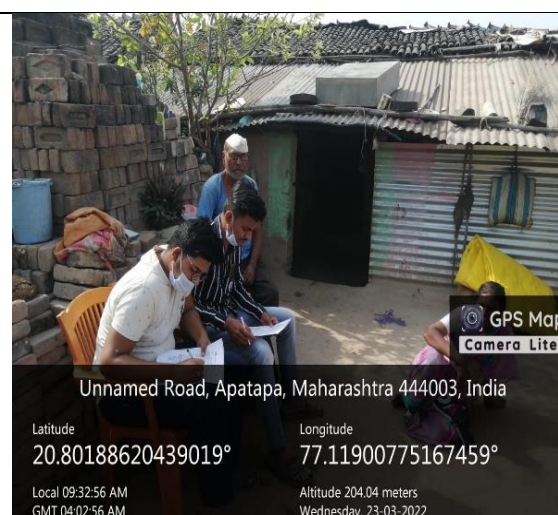
Mr. Uday Vaze, Director, EFEC (Environment & Forest Education Center), Akola, guided villagers about conservation of local biodiversity. ↓



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### The Base line survey of Families

The Base line survey of 5 villages was done by the students and the Nodal officer, UBA, of the institute, Dr. Rashmi Joshi Sawalkar to clearly define the existing scenario and to collect the basic data. They identify problems faced by the people as well as the potential for development.



Sr.no.	Name of Adopted Villages	No. of Families surveyed
1	Apatapa	223
2	Apoti Khurd	144
3	Apoti Budruk	163
4	Sultanpur	55
5	Akhatwada	183



**'Earn and Learn' Benefits to students**

Students got opportunity to work under 'Earn and Learn' scheme for doing work of uploading baseline survey forms on Unnat Bharat Abhiyan portal ↓

Debit Voucher No. \_\_\_\_\_ Date : 18 / 12 / 2021 Cash Book Folle No. \_\_\_\_\_

**Shri R.L.T. College of Science, Akola.**

Pay Rs. 2000/- in Words Two thousand only.

to Shri Ku. Sejal Vijay Badode.

on account of Unnat Bharat Abhiyan Honararium Paid by cash of Rs.2000,  
as on date 18.12.2021 against to upload forms on UBA Portal under  
Earn & Learn Scheme.

Rs. 2000/- Sanctioned  
**PASSED FOR PAYMENT  
PAID & CANCELLED**  
Principal  
[Signature]  
**PRINCIPAL**

[Signature]  
Accountant  
U.B.A. Coordinator  
Dr. R.P. Joshi (Sawalkar)

[Signature]  
Received Payment of  
Rs. 2000/-  
Signature of payee  
[Signature]

Debit Voucher No. \_\_\_\_\_ Date : 18 / 12 / 2021 Cash Book Folle No. \_\_\_\_\_

**Shri R.L.T. College of Science, Akola.**

Pay Rs. 2000/- in Words Two thousand only.

to Shri Ku. Rutuja Ramdas Thakare.

on account of Unnat Bharat Abhiyan Honararium paid by cash of Rs.2000/-  
as on date 18.12.2021 against to upload forms on UBA Portal  
under "Earn & Learn" Scheme.

Rs. 2000/- Sanctioned  
**PASSED FOR PAYMENT  
PAID & CANCELLED**  
Principal  
[Signature]  
**PRINCIPAL**

[Signature]  
Accountant  
U.B.A. Coordinator  
Dr. R.P. Sawalkar (Joshi)

[Signature]  
Received Payment of  
Rs. 2000/-  
Signature of payee  
[Signature]

Debit Voucher No. \_\_\_\_\_ Date : 18 / 12 / 2021 Cash Book Folle No. \_\_\_\_\_

**Shri R.L.T. College of Science, Akola.**

Pay Rs. 2000/- in Words Two thousand only

to Shri Ku. Vaishnavi Ramesh Dalir B.K. W.

on account of Unnat Bharat Abhiyan Honararium Paid by cash of  
Rs. 2000/- as on dt 18.12.2021 against to upload forms on UBA Portal under  
Earn & Learn Scheme.

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**PASSED FOR PAYMENT  
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[Signature]  
**PRINCIPAL**

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Received Payment of  
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[Signature]

**Presentation of work in front of Regional coordinating unit of Unnat Bharat Abhiyan**

Dr. Rashmi Joshi Sawalkar, UBA Coordinator, attended one day 'Tech 4 Seva' Workshop at Sant Gadge Baba Amravati University, Amravati, organised by Regional coordinating unit of Unnat Bharat Abhiyan. She presented work performed by Shri R.L.T. College of Science, Akola, as Participating Institute under Unnat Bharat Abhiyan as well as proposed plans for 5 adopted villages.



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## Best Practice - 2

### **Title of the Practice:**

#### **Green Chemistry: An Innovative Technology**

### **Objectives of the Practice:**

- To drive chemistry students towards clean and green technology.
- To create awareness among students about environment protection
- Inspiring students to keep the environment pollution free by using minimum energy in daily life.

### **The Context:**

The Drive towards clean technology in the chemistry laboratory in view of to reduce, to reuse, to recycle and to recover the natural resources requires a level of innovation and new technology. The green chemistry revolution provides an enormous number of opportunities to discover and apply new synthetic approaches using alternative feedstocks; ecofriendly reaction conditions, energy minimizations and the design of less toxic and inherently safer chemicals.

### **The Practice:**

- Department of Chemistry took a green step towards the adaptation of green chemistry concept not only in the theory, but also applying it in laboratory for practical purposes.
- The laboratories are well constructed in the center of the college with proper ventilation and considering the sunlight factor also. So, there is no need of light during the day time in laboratory which help to save the Electrical energy.
- Procedure of many practicals have been changed in vision to avoid the use of harmful and toxic materials.
- The faculties of our department allot the project related to Green Chemistry and related to how to save the environment like water conservation, solid waste management etc.
- All the faculties used microwave instead of traditional heating process to save the Gas energy and time too. Many Projects of M.Sc. Students have been based on microwave synthesis only.
- In B.Sc. First year instead of using sodium hydroxide use of lithium hydroxide is done.
- Acids and bases are not thrown directly in basin. Acids and bases are first neutralized and then its disposal is done.
- Safety equipment's like hand gloves, goggles etc. are provided to the students and laboratory Assistant.
- Department of Chemistry took initiation for water harvesting, liquid and solid waste management.

### **Evidences of Success:**

- Minimum use of electricity due to maximum natural light and air in laboratories.
- Due to non-conventional method of using microwave, L.P.G. consumption is reduced to great extent. Time required for the reaction is reduced from 6-7 hours gas heating by 5-10 minutes microwave reaction.

- Many projects of waste water treatment, solid waste management and liquid waste management in chemistry laboratory are allotted to the students, which increases environmental consciousness in them.

### Resource Required:

Apart from some apparatus will of teacher to apply Green Chemistry concept is must.

### Problem Encountered:

The green chemistry revolution is providing an enormous number of challenges to those who practice in chemistry laboratory. With these challenges however there are number of opportunities to develop new technique and make the chemistry more interesting.

### Green Chemistry: An Innovative Technology

#### Photographic evidences



Paper Bag Making workshop



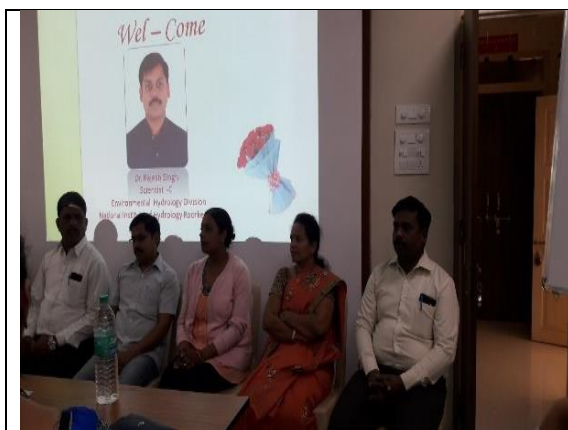
Hands on workshop on Herbal Products



Poster competition on Green Chemistry







Guest lecture on water management By Mr. Pangarkar



Resource person for online certificate course on Renewable sources of energy



Workshop on Hazardous Management and Fire Extinguisher Demonstration



Use of Microwave for heating instead of tradition heating method to conserve the Gas energy



Use of various safety measures in The Departments of Chemistry

**LIQUID WASTE MANAGEMENT IN COLLEGE CAMPUS**

**PROJECT REPORT**

A dissertation submitted in partial fulfillment of the Requirements of the degree of **MASTER OF SCIENCE**

**IN CHEMISTRY**

Submitted By  
**Miss. Komal Shankar Langole**  
Department of Chemistry  
Shri. R.L.T. College Of Science, Akola  
(NAAC Reaccredited with Grade A)

Guided by

**Prof. Shankesh Zyate**  
Department of Chemistry,  
Shri. R.L.T. College Of Science, Akola



P.G. DEPARTMENT OF CHEMISTRY  
SHRI. R.L.T. COLLEGE OF SCIENCE, AKOLA  
(NAAC Reaccredited with grade "A" with the CGPA 3.12)

2020-2021

**HAZARDOUS CHEMICAL AND RADIOACTIVE WASTE MANAGEMENT IN COLLEGE CAMPUS**

**PROJECT REPORT**

A dissertation submitted in partial fulfillment of the Requirements of the degree of

**MASTER OF SCIENCE IN CHEMISTRY**

Submitted By

**Miss. Shrutika Vijayrao Kadam**  
Department of Chemistry  
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Guided by

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Department of Chemistry,  
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Shri R. L. T. College Of Science, Akola  
(NAAC Reaccredited with grade "A" with the CGPA 3.12)

2020-2021

Projects given to students on topic 'Waste Management'

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