



Shri. Shivaji Science College, Amravati

Dept. of Environmental Science

Academic Activities : 24-25

1.Training program on “Application of Statistic in Biological Sciences”

Title of the activity: Training program on “Application of Statistic in Biological Sciences”

Objective:

1. To familiarize students with fundamental statistical concepts and their relevance in biological sciences.
2. To develop skills in data collection, organization, and interpretation for biological research.
3. To highlight the application of statistics in research studies.
4. To train students in interpreting statistical results and effectively presenting them in scientific reports and publications.

Activity Conducted: Department of Environmental Science, Shri Shivaji Science College, Amravati organized Training program on “Application of Statistic in Biological Sciences” under DBT STAR college scheme on 7th March 2025 in A. V. Theatre of the college. The program aimed to equip students of U.G. with statistical concepts applicable in biological research, to cover the topics of statistics included in their syllabus and highlight its practical applications in various subjects of Biological Sciences. Training program includes guest lecture and the hands on sessions.

The program commenced with a lighting of lamp & paying homage to Dr. Panjabrao alias Bhausaheb Deshmukh, founder president of Shri Shivaji Education Society. It was followed by the welcome of speaker of Ist session, Dr. H. S. Lunge sir, former Professor & Head, Dept. of Statistics and IQAC co-coordinator of the college by Dr. Sangita P. Ingole, Head, Dept. of Environmental Science and IQAC co-

coordinator of the college by presenting sapling. Dr. Ingole madam then presented introductory speech of the program.

In the introductory speech, Dr. Ingole madam told students the importance of statistics in biological sciences. She also mentioned that this program is designed to bridge the gap between biological questions and statistical solutions. She added that statistical thinking can enhance to draw meaningful conclusions in biological research. She urged students to ask questions and actively participate in the discussions and hands-on exercises. Then the anchor of the program told students the overall program details about the sessions - I, II & III. Dr. Lunge sir was then requested to start his lecture of Ist session.

In his lecture of the training program, Dr. Lunge sir thoroughly explained in a very simple language the importance of statistical methods in life sciences. He covered near about all topics including classification of biostatistics, stages in statistical investigation, various terms in statistics, variables, measurement scales, mean, mode, median, measure of dispersion, correlation coefficient, regression, linear equation, statistical inference, hypothesis testing, t- distribution, t- test, independent & dependent samples, z-test, chi-square analysis, ANOVA, f-test etc. His overall lecture emphasized how statistical analysis is useful in fields of life sciences. After the question and answer session was conducted. The student gave feedback that he explained the topics well and that his lecture helped them understand statistical concepts easily.

After the lecture, the program moved on to practical sessions conducted by **Mr. V. R. Charthad** and **Dr. Sajia Patel**, fix pay teachers from Dept. of Statistics of the college. **Mr. V. R. Charthad**, guided students through exercises to calculate mean, median, standard deviation, and interpret biological data sets while **Dr. Sajia Patel** provided a thorough explanation and practical demonstrations of t-test, f-test, chi-square test, ANOVA and other statistical methods. With this, she helped students to understand & experience the practical significance of these methods in life sciences. In the question and answer session students said that these sessions boosted their confidence in using statistical tools and methods. These sessions enabled participants to gain practical exposure to statistical tools and techniques.

The program witnessed enthusiastic participation of 35 students of B.Sc.III & B.Sc.I from subjects of Environmental Science, Bioinformatics, Zoology, chemistry and Botany who engaged actively in discussions and practical exercises. The interactive nature of the hands-on sessions fostered a deeper understanding of statistical applications in biological research.

The first session of the training program was concluded with a vote of thanks to the speakers and participants by Dr. K. J. Gawai & IInd, IIIrd sessions by Dr. Manisha A. Jane.

Outcome:

1. Participants understood basic statistical concepts and terminologies relevant to biological data analysis.
2. Participants were able to apply descriptive and inferential statistical techniques to biological data sets.
3. Participants learned to choose appropriate statistical tests for biological research.
4. Participants were able to interpret statistical results in the context of biological questions.
5. Participants developed skills to critically evaluate statistical methods.
6. Participants learned how to effectively communicate statistical findings in biological research and scientific reports.



Shri Shivaji Education Society, Amravati's
Shri Shivaji Science College, Amravati

NAAC: A⁺ Grade (CGPA 3.42), PM UShA: Component-3 Grant (Strengthen College), UGC: CPE,
NIRF - 2024 : Rank - 99, DBT: STAR College (Strengthening Component), DST: FIST,
ISO: 9001-2015, SGBAU: Lead College, Career Katta: Centre of Excellence



IQAC Initiative under DBT Star College Scheme

Department of Environmental Science

Organizes
Training Program on

**Application of Statistics
in Biological Sciences**

For B. Sc 3rd yr Students



Friday, 7 March 2025



12:00 PM - 4:00 PM



Venue : AV Theatre

Session : 1

Time : 12:00 PM - 1:30 PM

Guest Speaker

Dr. H. S. Lunge

Ex. Professor & Head
Dept. of Statistics & IQAC Coordinator
Shri Shivaji Science College,
Amravati

Time : 1:30 PM - 2:00 PM (High Tea)

Session : 2

Time : 2:00 PM - 4:00 PM

Hands on Training

Mr. V. R. Charthad

Dr. Sajiya Patel



**Scan Q R Code
To Register**

Registration Free

Dr. K. J. Gawai

Dr. M. A. Jane

Workshop Coordinator
Dept. of Environmental
Science

Dr. S. P. Ingole

IQAC Coordinator
Shri Shivaji Science College,
Amravati

Dr. G. V. Korpe

Principal
Shri Shivaji Science College,
Amravati

Flyer of the Training Program

Shri Shivaji Science College, Amravati
Dept. of Environmental Science
Training Program on "Application of Statistics in Biological Science"

7 March 2025

Student List

Sr. No.	Student Name	Class	Sign
1	Vaishnavi S. Bhuyar	MSc	<i>Vaishnavi</i>
2	Samruddhi P. Sonone	MSc	<i>Sonone</i>
3	Yogeshwari S. Surve	MSc	<i>Surve</i>
4	Abhay A. Ghale	MSc II (FVS)	<i>Ghale</i>
5	Prachinca P. Meshram	BSc (CEZ)	<i>Meshram</i>
6	Yashasvi U. Jambude	BSc (CEZ)	<i>Jambude</i>
7	Yash V. Jadhao	BSc (CEB)	<i>Jadhao</i>
8	Rudra A. Shrivastava	BSc (CEZ)	<i>Shrivastava</i>
9	Yash S. Waghmare	BSc (CEB)	<i>Waghmare</i>
10	Shreeshail A. Kothare	BSc MEB	<i>Kothare</i>
11	Hemant D. Rathod	BSc (MEB)	<i>Rathod</i>
12	Sham A. Kaldekar	BSc I (MEB)	<i>Kaldekar</i>
13	Yuvraj mungilal Bethekar	BSc I (MEB)	<i>Bethekar</i>
14	Sakshi D. Bijwe	MSc II nd (Bioinfo)	<i>Bijwe</i>
15	Avantika Ashok Deshpande	MSc I st (Bioinfo)	<i>Deshpande</i>
16	Yash S. Nagzirkar	MSc II nd (Bioinfo)	<i>Nagzirkar</i>
17	Shrutika S. Hinkare	MSc II nd (Bioinfo)	<i>Hinkare</i>
18	Ektar V. Patil	MSc II nd (Bioinfo)	<i>Patil</i>
19	Priyanka Sunil Akhane	MSc II nd (Bioinfo)	<i>Akhane</i>
20	Amiksha G. Nistane	MSc I st (Bioinfo)	<i>Nistane</i>
21	Uma R. Atram	MSc II nd	<i>Atram</i>
22	Sanika V. Deshpande	MSc II nd	<i>Sanikav</i>
23	Samiksha Santosh Kale	M.Sc. I yr	<i>Kale</i>
24	Rutuja Kailas Jetha	M.Sc I yr	<i>Jetha</i>
25	Pratiksha R. Lande	M.Sc I yr	<i>Lande</i>
26	Pranjal R. Horne	M.Sc. I yr	<i>Horne</i>
27	Samruddhi S. Chaudhari	MSc I-yr (Bioinformatics)	<i>Chaudhari</i>

Student List

Attendance of the Students: Sheet 2



Dr. H. S. Lunge Delivering Lecture



Mr. V. R. Charthad taking hands-on session on statistical problems.



Dr. Sajia Patel taking hands on on various tests in statistics



Group Photo of Training Program.

[Handwritten Signature]

Signature
 Programme Co-Ordinator

[Handwritten Signature]

Signature
 Head of Department

2. “One Day Hands-on Training on Basic Scientific Experiment”

Title of the activity: “ One Day Hands-on Training on Basic Scientific Experiment”

Objectives:

1. To equip teachers with practical skills and methodologies for conducting basic scientific experiments.
2. To enhance the effectiveness of practical demonstrations.
3. To encourage innovative and hands-on teaching strategies in science education.
4. To enhance the teachers' ability to engage students in practical learning through interactive and experiential teaching techniques.

Activity conducted:

To equip teachers with practical skills and methodologies for conducting basic scientific experiments a “One Day Hands-on Training on Basic Scientific Experiment” under DBT STAR Scheme was organized by the Department of Environmental Science, Shri Shivaji Science College , Amravati, in collaboration with Amravati Municipal Corporation , Amravati on 29th March 2025. It was conducted in Auditorium Hall of Education office of Amravati Municipal Corporation , Ambapeth, Amravati. To enhance teaching methods and improve the delivery of practical knowledge, of the teachers was the main motto of the One Day Hands-on Training program. The ultimate aim of hands on training was to foster curiosity and nurture scientific thinking in young students through the teachers.

Dr.Dinesh D. Khedkar, DBT Star Scheme Coordinator of the college and Head of Department of Botany was chairperson for this workshop. Dr. Prakash Meshram, Education Officer, Amravati Municipal Corporation , Amravati, was the chief guest and inaugurator of the workshop..Mr. Sanjay Tikaria, Director, Tikaria's, Science Hobby Centre, Jalna was the guest of honour and speaker of the workshop. Dr. Sangita Ingole, IQAC Coordinator of the college and Head, Department of Environmental Science, Mr. Yogesh Pakhale, School Inspector, Amravati Municipal Corporation, Amravati, Dr. Kirtidhvaj J. Gawai & Dr. Manisha A. Jane Hands-on

Training Activity in charge, Department of Environmental Science were present for the inaugural function of the workshop.

Introductory and welcome speech was delivered by Dr. Sangita Ingole, IQAC Coordinator and Head of Department of Environmental Science. Here, Dr. Ingole madam emphasize the need of the workshop and highlighted the workshop's overall objectives. She told that the main objective was to equip teachers with various easy and interesting ways by which he /she can convey the students the concepts and idea behind the experiments. She added that another objective was to provide teachers the materials to prepare the handy & basic equipments needed to perform experiments and involve students in the experiments to give them experiential learning. After this, she introduced Mr. Sanjay Tikaria, Director, Tikaria's, Science Hobby Centre, Jalna & speaker of the workshop

Hon. Dr. Prakash Meshram, expressed his thought that providing skills to student is one of the objectives of New education policy. He added that if we want to impart skills to the coming generation, and achieve higher levels of understanding of concepts, solving problems, experiments-based teaching to students is the need of the hour. This workshop will surely prepare teachers to provide their students experiential learning which will help to inculcate skills among students. He thanked the department & the college for organizing the workshop for AMC school teachers. He asked participant teachers whether to organize such workshop in future. After unanimous positive response of the teachers, he requested Ingole madam to organize such workshop in future also.

In the presidential speech of the workshop, honorable Dr. Dinesh Khedkar expressed his remarks as teacher plays a very important role in making a subject interesting & easy. Students find the subject interesting in which they involve. This workshop will provide teachers easy tools by which they can involve their students, engage their students making the subject interesting and enjoyable. He emphasized the importance of experiential learning in the new education policy and this kind of workshop will help the teachers to be trained for it, to develop the skills and to boost the enthusiasm of the students. He also said that such activities encourages critical thinking, creativity and deeper understanding of underlying scientific principles & encourages deeper cognitive engagement.

In the first session of the workshop, Mr. Sanjay Tikaria, speaker of the workshop guided teachers on how to handle the demonstration conducted at the school level. He showed teachers various small equipments prepared by him with the help of easily available day to day materials to demonstrate different experiments. He told teachers that it is not necessary to have expensive scientific equipment mentioned in the procedure of the experiments. He told them that we can prepare our own equipment from small small things or materials which we found in our surroundings. In this session, a kit was provided to every teacher specially prepared for them containing materials which is useful to convey concepts of the different experiment of different science subjects viz. Biology, physics, chemistry etc. The kit contains materials like thread, piece of cardboard, straw, plastic pipe, chart of body organs, prism, concave, convex lence etc. which is useful in showing different concepts of the experiment individually or by assembling them.

In the second session of the workshop, he effectively demonstrated, explained and clarified the concepts of experiments from Physics, Chemistry & Biology with the help of the materials provided from the kit. He demonstrated experiments showing different properties of sound with the help of straw & scissor. He also tried the same experiment with help of small hollow plastic pipe. He demonstrated centrifugal & centripetal force and its properties with the help of thread, small square piece of card board & paper cup filled with water. He then took hands on session of making different equipments needed for different experiments. In this, teachers actively performed different experiments in their syllabus with the help of materials provided to them. Let's do experiments by ourselves was his motto. At the end of this session teachers were asked to come on stage for their feedback. 5 teachers expressed their positive remarks and thanked the college & Tikariya sir for the program. At last teachers were also told to submit online feedback with the help of Google form link sent on their what's app group

50 science & mathematics teachers from all the Amravati Municipal Corporation schools attended the Hands-on Training. The program was conducted by Dr. Manisha Jane and vote of thanks was given by Dr. Kirtidhavaj Gawai.

Outcome: 1. Teachers realized that science experiments can be done using simple, everyday materials instead of expensive equipment.

2. Teachers gained insights into innovative pedagogical tools for making their experimental demonstrations more interactive and engaging for students.
3. Hands-on sessions allowed teachers to practice and experiment with new easily available tools and methodologies under expert guidance.
4. Teachers got opportunity for collaboration & networking with experts in pedagogy and experiment design to foster continuous learning and improvement.
5. The workshop focused on making experimental learning more exciting and accessible, thereby improving teacher's outcomes.

Flyer of the Workshop




Shri Shivaji Education Society, Amravati's
Shri Shivaji Science College, Amravati
 NAAC: A+ Grade (CGPA 3.42), PM USHA: Component-3 Grant (Strengthen College),
 UGC: CPE, NIRF-2024: Rank - 99, DBT: STAR College (Strengthening Component),
 DST: FIST, ISO: 9001-2015, SGBAU: Lead College, Career Katta: Centre of Excellence

Organized by
DEPARTMENT OF ENVIRONMENTAL SCIENCE
 In collaboration with
Amravati Municipal Corporation, Amravati
Under DBT STAR Project Scheme
ONE DAY HANDS ON TRAINING ON
BASIC SCIENTIFIC EXPERIMENT
Date : 29 March, 2025
मूलभूत वैज्ञानिक प्रयोगांवर
एक दिवसीय प्रत्यक्ष प्रशिक्षण कार्यक्रम
२०२५






प्रायोगिक प्रत्यक्षिकांची प्रभावीता वाढविण्यासाठी अमरावती महानगरपालिका अमरावती अंतर्गत येणाऱ्या विज्ञान शिक्षकांना नावीन्यपूर्ण शैक्षणिक साधनांसह सुसज्ज करणे हे उद्दिष्ट ठेवून पर्यावरण शास्त्र विभाग श्री शिवाजी विज्ञान महाविद्यालय अमरावती व अमरावती महानगरपालिका अमरावती यांच्या संयुक्त विद्यमाने डीबीटी स्टार स्कीम अंतर्गत मूलभूत वैज्ञानिक प्रयोगांवर एक दिवसीय प्रत्यक्ष प्रशिक्षण कार्यक्रमाचे दिनांक २९ मार्च २०२५ रोजी आयोजन करण्यात आले आहे.

Dr. D. D. Khedkar Coordinator DBT Star Programme	Dr. G. V. Korpe Principal Shri Shivaji Science College, Amravati
Dr. Prakash Meshram Education Officer, Amravati Municipal Corporation, Amravati	Dr. S. P. Ingole Head & IQAC Coordinator Dept. of Env. Science
Dr. K. J. Gawai Activity Incharge	Dr. M. A. Jane Activity Incharge

Registration Link - <https://forms.gle/6nnQpqqdVxYuBi8Lu5>

Under DBT STAR Project Scheme
ONE DAY HANDS ON TRAINING ON
BASIC SCIENTIFIC EXPERIMENT
2025

SCHEDULE AT A GLANCE

8.00 to 8.30 AM	:	Registration & Tea
8.30 to 9.00 AM	:	Inaugural Function
SCIENTIFIC SESSION - I		
9.00 to 10.30 AM	:	Speaker Shri Sanjay Tikariya Director, Tikariya's Science Hobby Center, Jalna
10.30 to 11.00 AM	:	Breakfast & Tea
SCIENTIFIC SESSION - II		
11.00 to 12.30 PM	:	Hands on Training
12.30 to 1.00 PM	:	Interaction with participant

Registration Link - <https://forms.gle/6nnQpqdVxYuBi8Lu5>



Attendance

Sr.No	Name of teacher	Contact no.	Email ID	Name of school	Signature
1.	Ku. Vrunda P. Thakare	9673360155	vrundadadhu7@gmail.com	MNP Hindi Boy's High school	Vr
2.	Ku. Pranali J. Kewate	8275217247	pranalinimkewate@gmail.com	MNP Upper Primary Marathi School No.18, Chhapasipura, Amravati	Kewate
3.	Ku. Vaishali R. Mahajan	7776892705	Vaishu230786@gmail.com	A.M.C. upper pri. school No. 18	Vaishali
4.	Ku. Bhawana A. Badhe	9766879926	badhesonu@gmail.com	MNP Hindi Girl's High school And.	Badhe
5.	Ku. Pratikha V. Chaudhary	9921281745	Pratikha45@gmail.com	MNP Marathi urdu pri. school No. 14	Chaudhary
6.	Ku. Poojanka A. Jyote	8698122220	Poojankajyote@gmail.com	MNP Hindi high school No. 11	Jyote
7.	Ku. Bareera Mehreen Misbah	8605708862	bareerahaque@gmail.com	MNP Urdu high school No. 6	Misbah
8.	Ku. Karifa S. Kale	9403390040	Karifikale54@gmail.com	MNP Marathi high school	Kale
9.	Ku. Bhawana A. Pawar	8788068610	pawarpawar.0488@gmail.com	M.N.P. upper pri. Marathi Akoli	Pawar
10.	Ku. Archana D. Likhitkar	9420920574	likhande.archana14@gmail.com	MNP Marathi Girl's High school	Likhitkar
11.	Ku. Pooja S. Yadav	8983118386	yadavpooja00084@gmail.com	MNP. upper pri hindi school No. 15, Krushna Nagar	Yadav
12.	Ku. Pranali D. Thakare	9881555255	pranali.thakare3@gmail.com	MNP school Nuvasari	Thakare
13.	Ku. Pragati K. Pund	9922797207	Pragathalekay2018@gmail.com	A.M.C. school beherda	Pund
14.	Ku. Kiran V. Shende	9403169550	kiranbikra29@gmail.com	A.M.C. school, Jewad	Shende
15.	Ku. Shantli Parween Akht	9309979371	Maheer8572@gmail.com	A.M.C. Urdu school no. 3 Gaudipuri	Akht
16.	Ku. Rekha M. Poble	7703623986	Poble.rekha@gmail.com	A.M.C. Urdu school Gaudipuri	Poble
17.	Gaurav V. Mohod	9970606003	gmohod1487@gmail.com	MNP Marathi school No. 5 Badnora	Mohod
18.	Yogesh S. Chale	8421069344	Yogeshchale84@gmail.com	M.N.P. school No. 15 SRPF	Chale
19.	Ravindra R. Sable	9887769963	srarisable1454@gmail.com	M.N.P. school no. 11 Bastur nagar	Sable

43.	Sushama S. Bhele	8275288783	sushamabhele87@gmail.com	M.N.P. Hindi school No.06, Faramba	S. Bhele
44.	Nazma Bassi	7248950280	Gazizahauz2@gmail.com	M.N.P. Urdu School No.8	
45.	Shagufta Yasmeen	7020360008		M.N.P. Urdu S. No-4 Amt.	
46.	Quazi Zeeshanuddin	9527109854	quaziZeeshanuddin333@gmail.com	M.N.P. Urdu S. No.09, Amt.	
47.	Anwar Hussain	9011097245	anwar8khan2000@gmail.com	M.N.P. Urdu No.9 Amt.	
48.	Nilesh S. Kowade	8083727461	nileshkowade41@gmail.com	A.M.C. Mazda's sch, No.2	
49.	Amreen Parveen Rahman	7620737368	amreen7385@gmail.com	Allama Jabal AMIC NO2 Alimpur	
50.	Mehak Anjum Rahman	9876682080			
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Glimpses of the Workshop



Teachers performing hands-on of the experiments



Mr. Sanjay Tikaria showing Sound & Air Pressure Expt.to the teachers



Dr. Dinesh Khelkar, DBT Star Scheme Co-ordinator addressing the teacher participants



Dr. Sangita Ingole, Head, Dept. of Environmental Science introducing Guest to the participant Teachers



Dr. Prakash Meshram, E.O., AMC, addressing teachers



Group Photo of the One Day Hands-on Training

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Signature

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Signature

3. “One Day workshop on Development & Application of Different Pedagogical Tools for Effective Demonstration of Experiments”

Title of the activity: “One Day workshop on Development & Application of Different Pedagogical Tools for Effective Demonstration of Experiments”

- Objective:**
1. Equipping teachers with innovative educational tools
 2. To enhance the effectiveness of practical demonstrations.
 3. To foster continuous professional development in pedagogical practices.
 4. To enhance the teachers' ability to engage students in practical learning through interactive and experiential teaching techniques.
 5. To provide a platform for teachers to discuss the challenges faced while demonstrating scientific experiments in classrooms.

Activity conducted: To equip teachers with educational tools, a One-day Workshop on “Development and Use of Educational Tools for Effective Demonstration of Experiments” under DBTSTAR Scheme was organized by the Department of Environmental Science, Shri Shivaji Science College, Amravati, was organized on **6 September 2024** in **Sir C. V. Raman Hall** of the college. To enhance teaching methods and improve the delivery of practical knowledge, of the teachers was also the objective of the one-day workshop. The ultimate aim of the workshop was to foster curiosity and nurture scientific thinking in young students through the teachers.

Dr. G. V. Korpe, honorable Principal of the college was chairperson for this workshop. Hon. Priya Deshmukh, Education Officer, Highschool Division, Amravati, was the chief guest and inaugurator of the workshop. Mr. P. S. Pandagale, Deputy Administrator, Shri Shivaji Education society, Amravati was present as special invitee. Mr. Sanjay Tikaria, Director, Tikaria's, Science Hobby Centre, Jalna was the guest of honour

and speaker of the workshop. Dr. Sangita Ingole, IQAC Coordinator and Head of Department of Environmental Science; Dr. Dinesh Khedkar, DBT Star Scheme Coordinator and Head of Department of Botany & Dr. K. J. Gawai, One Day workshop coordinator and Asso. Professor, Department of Environmental Science were present for the inauguration of the workshop.

Introductory and welcome speech was delivered by Dr. Sangita Ingole, IQAC Coordinator and Head of Department of Environmental Science. Here, Dr. Ingole madam emphasize the need of the workshop and highlighted the

workshop's overall objectives. She told that the main objective was to equip teachers with various easy and interesting ways by which he /she can convey the students the concepts and idea behind the experiments. She added that another objective was to provide teachers the materials to prepare the equipments needed for the experiments and involve students in the experiments to give them experiential learning. After this, she introduced all the dignitaries on the dias present for the workshop.

Hon. Priya Deshmukh expressed her thought that providing skills to student is one of the objectives of New education policy. She added if we want to impart skills to the coming generation, and achieve higher levels of understanding of concepts, solving problems, experiments-based teaching to students is the need of the hour. This workshop will surely prepare teachers to provide their students experiential learning which will help to inculcate skills among students.

Repected Mr. P. S. Pandagale congratulated the organizing committee to organize such workshop. He said application of various pedagogical tools is crucial in enhancing the demonstration of experiments. He told demonstration of experiments in science subject is to help students to foster critical thinking, problem-solving skills, etc. in them but many times in schools it is overlooked due to some or other reasons. Teacher's exposure through such type of workshop definitely promotes the experimental environment in budding minds of the students. This workshop will prove to be the refresher course for the teachers and encourage them to inculcate various skills among students. He added that such workshops will be continued periodically. skills.

Dr. Dinesh Khedkar expressed his remarks as teacher plays a very important role in making a subject interesting & easy. Students find the subject interesting in which they involve. This workshop will provide teachers easy tools by which they can involve their students, engage their students making the subject interesting and enjoyable.

Dr. Sangita Ingole told that as per the new education policy, teaching students with more emphasis on demonstration is an important part of their future success. She said that such programs are integral to enhancing the quality of education.

In the presidential speech of the workshop, the honorable principal of the college Dr. G. V. Korpe emphasized the importance of experiential learning in the new education policy and this kind of workshop will help the teachers to be trained for it, to develop the skills and to boost the enthusiasm of the students. He also said that India is a young country and such activities are necessary to increase the quality of education for this youth to stand strong in the future. Such activities encourages critical thinking, creativity and deeper

understanding of underlying scientific principles. With such type of demonstration students are able to present with real world problem and must design experiment to solve or understand problem. This approach encourages deeper cognitive engagement.

In the first session of the workshop, Mr. Sanjay Tikaria, speaker of the workshop guided teachers on how to handle the demonstration conducted at the school level. He showed teachers various small equipments prepared by him to demonstrate different experiments. He told teachers that it is not necessary to have expensive scientific equipment mentioned in the procedure of the experiments. He told them that we can prepare our own equipment from small small things or materials which we found in our surroundings. In this session he provided a kit to every teacher specially prepared for them containing materials which useful to convey concepts of the different experiment of different science subjects. The kit contains materials like thread, piece of cardboard, straw, plastic pipe, chart of body organs etc. which is useful in showing different concepts of the experiment individually or by assembling them.

In the second session of the workshop, he effectively demonstrated, explained and clarified the concepts of experiments from Physics, Chemistry & Biology with the help of the materials provided from the kit. He demonstrated experiments showing different properties of sound with the help of straw & scissor. He also tried the same experiment with help of small hollow plastic pipe. He demonstrated centrifugal & centripetal force and its properties with the help of thread, small square piece of card board & paper cup filled with water. He then took hands on session of making different equipments needed for different experiments. In this, teachers tried different experiments in their syllabus with the help of materials provided to them. Let's do experiments ourselves was his motto.

103 science teachers from the society school and other school attended the workshop. The program was conducted by Dr. Vaishali Deshmukh and vote of thanks was given by Dr. Kirtidhavaj Gawai.

- Outcome:**
1. Teachers gained insights into innovative pedagogical tools for making their experimental demonstrations more interactive and engaging for students.
 2. They learnt to design experiments that are both simple and effective, helping students better grasp key concepts.
 3. Hands-on sessions allowed teachers to practice and experiment with new tools and methodologies under expert guidance.

- Teachers got opportunity for collaboration & networking with experts in pedagogy and experiment design to foster continuous learning and improvement.
- The workshop focused on making experimental learning more exciting and accessible, thereby improving teacher's outcomes.

Flyer of the Workshop



Shri Shivaji Education Society, Amravati's
SHRI SHIVAJI SCIENCE COLLEGE, AMRAVATI

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IQAC Initiative
 Organized by
Dept. of Environmental Science
 Under DBT Star Project



**DEVELOPMENT & APPLICATION OF
 DIFFERENT PEDAGOGICAL TOOLS FOR
 EFFECTIVE DEMONSTRATION OF EXPERIMENTS**

Friday 6th September, 2024

प्रायोगिक प्रात्यक्षिकांची प्रभाविता वाढविण्यासाठी श्री शिवाजी शिक्षण संस्था, अमरावती अंतर्गत येणाऱ्या शालेय शिक्षकांना नाविन्यपूर्ण शैक्षणिक साधनांसह सुसज्ज करणे हे उद्दिष्ट ठेवून पर्यावरण शास्त्र विभाग, श्री शिवाजी विज्ञान महाविद्यालय अमरावती, डीबीटी स्टार स्कीम अंतर्गत “प्रयोगांच्या प्रभावी प्रात्यक्षिकासाठी विविध शैक्षणिक साधनांचा विकास आणि उपयोग (One Day workshop on Development & Application of Different Pedagogical Tools for Effective Demonstration of Experiments) या विषयावर एक दिवसीय कार्यशाळा दि. ६ सप्टेंबर २०२४ आयोजित करण्यात आली आहे.

कार्यशाळेत हॅन्ड्स-ऑन सत्रे, तज्ञांची व्याख्याने आणि अध्यापन पद्धतीतील नवीनतम ट्रेंड आणि सर्वोत्तम पद्धतींवर चर्चा यांचा समावेश असेल. सोबतच प्रत्येक शिक्षकांना प्रात्यक्षिक करण्यासाठी लागणाऱ्या महत्वाच्या साहित्याची किट, प्रात्यक्षिक कसे घ्यावे याबद्दलचे स्टडी मटेरियल पुरवण्यात येईल.

या कार्यशाळेमुळे विद्यार्थ्यांमध्ये रुची, वैज्ञानिक दृष्टिकोन व नवीनतम संकल्पना निर्माण होण्यासाठी नवीन दिशा या कार्यशाळेत सहभागी होणाऱ्या शिक्षकांमार्फत विद्यार्थ्यांपर्यंत पोहोचविल्या जाईल.

Dr. G. V. Korpe Principal	Dr. D. D. Khedkar Programme Coordinator (DBT Star Programme)	Dr. S. P. Ingole Head & IQAC Coordinator Dept. of Env. Science
Dr. K. J. Gawai Workshop Coordinator Dept. of Env. Science	Mr. V. D. Bute Workshop Co-Coordinator Dept. of Env. Science	Dr. M. A. Jane Workshop Co-Coordinator Dept. of Env. Science

DBT Star Project Catalyzed One Day workshop on
**DEVELOPMENT & APPLICATION OF
DIFFERENT PEDAGOGICAL TOOLS FOR
EFFECTIVE DEMONSTRATION OF EXPERIMENTS**

Friday 6th September, 2024

WORKSHOP SCHEDULE AT A GLANCE

10.30 to 11.30 AM	Registration and Tea
11.30 to 12.00 Noon	Inaugural Function
Scientific Session - I	
12.00 to 1.30 PM	- Speaker - Shri Sanjay Tikariya Director, Tikariya's Science Hobby Center, Jalna
1.30 to 2.00 PM	LUNCH BREAK
Scientific Session - II	
2.00 PM to 3.45 PM	Hands - on Experiments at school level
3.45 to 4.00 PM	TEA BREAK
4.00 to 5.00 PM	Interaction with participants & Valedictory Function

Registration Link : <https://forms.gle/2nvG1c7KEeMm9MGR8>

Last Date of Registration : 4th Sept. 2024 upto 6.00 pm



Attendance

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10. #

Glimpses of the Workshop



Teachers handling scientific tools of the experiments



Teachers performing hands-on of the experiments



Science Teachers Performing Experiments



Resource person of the workshop Mr. Sanjay Tikaria showing Sound Expt.to the teachers



Respected Principal of the college addressing the teacher participants



Group Photo of the One Day Workshop

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Signature

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Signature

Programme Co-Ordinator

Head of Department