

6.8 Teacher's Innovative Ideas:

Implemented:

- Organized international conference on emerging issues of biodiversity and environment for sustainable development
- Lifesciences club is contributing to society and working on creating awareness for helping stray animals, cattles and also working for minimising plastic use and carbon credit.
- Students participated in organic farming techniques and vermiculture. All of them prepared vermicompost and bioenzymes by discarded fruits and vegetables."
- Organised Plasma Exhibhition.
- Ad on courses implemented.
- Lab training Programme implemented by for various Laboratory staff.
- "Under the DEST-awarded project focused on wild food plants (WFPs), Innovated value added recipes with herbs, filed patent for 5 recipes, out of these 4 got published. These publications aim to disseminate knowledge about WFPs, their nutritional value, and their role in sustainable agriculture. Patent Published=04
- Recipe for herbal Burans Tea. Published as caffeine Free. Herbal Tea Composition of Rhododendron arboreum and Method of Preparation Thereof (2023). Application No.202211029393 A. Publication Date: 29/12/2023. No. of Pages: 22 No. of Claims :2
- Recipe for Value added Sepu-badi (With addition of *Kalanchoe pinnata* & *Euphorbia hirta*). Published as nutritionally enriched black Gram Dumpling (Sepu Vadi) and Method of Preparation Thereof (2024). Application No.202211049534 A. Publication Date: 01/03/2024. No. of Pages: 18 No. of Claims :5
- Recipe for Value added pasta (With addition of (*Tinospora cordifolia* & *Euphorbia hirta*). Application No.202311004925 A. Publication Date : 26/07/2024. No. of Pages : 16 No. of Claims : 3.
- Recipe for Amla-lukath (*Phyllanthus emblica* & *Eriobotrya japonica*) herbal Tea. Application No.202311004924 A. Publication Date : 26/07/2024. No. of Pages : 29 No. of Claims : 4

- Presentations, assignments and class tests on different topics related to subject should be given to students in online and offline mode of teaching. Students should be taken to visit different historical buildings and places to understand art and architecture of past.
- Established Yuva Tourism Club at Vallabh Govt. College, Mandi.
- Organized variety of outdoor activities for students of Vallabh Govt. College, Mandi."
- Use of ICT tools and techniques in education: The class of environment science make best use of the technology to cater the needs of large strength of students. Projectors and powerpoint presentations are being used for classroom teaching with voice amplification tools to make it audible clearly to the student sitting on last bench.
- Youtube Channel for students: An initiative have been taken to create a youtube channel named as "" Environment matters"" where all the classroom topics are provided in the form of recorded powerpoint lectures to easy revision by the students. Along with the syllabus the students are also being made aware about the various environmental issues through short videos, shorts and reels etc.
https://youtu.be/7YDEHNvI_h8?si=T3dWn3ITr8KPbHBi
- Organized orientation and refresher programme in the college
- Use of google classrooms for attendance during covid period
- Use of Microphone with speaker in classroom for better reach to students"
- "Teacher focuses on enhancing, engagement, improving learning outcomes and integrating technology.
- Flipped classroom, Project based learning, Gamification, Differentiated instruction, Technology integration, Peer teaching, Service learning, Socratic Seminars play very role in quality education."
- Profess secular thoughts among people and uplifting their educational understanding.
- Organised a course for undergraduate students entitled "Essential Computer Application Skills" with 4credits (32 hrs) in the month of September to November, 2024.
- You tube Channel- Dr. Radhika Jamwal@zoologytime1272.
- organised international conference on emerging issues of biodiversity and environment for sustainable development:

(1) life science club is contributing to society and working on creating awareness for helping stray animals dogs, cattles and also working for minimising plastic use and carbon credit.

(2) Students participated in organic farming techniques and vermiculture. All of them prepared vermicompost and bioenzymes by discarded fruits and vegetables. Year 24-25 ;

1. Group formation for the smooth conduction of various activities of the department.
2. Gave responsibilities to the lifescience club members for overall management of department.
3. Students involvement in taking care of Notice board display and interactive board.
4. Participation of students in plastic collection in their surroundings and work for sustainable development goals.
5. Aquarium maintenance by the third year students.
6. Model preparation of different topics.

- Organised:
 1. Plasma Exhibition
 2. Ad on courses
 3. Lab training Programme
- Under the DEST-awarded project focused on wild food plants (WFPs), Innovated value added recipes with herbs, filed patent for 5 recipes, out of these 4 got published. These publications aim to disseminate knowledge about WFPs, their nutritional value, and their role in sustainable agriculture. Patent Published=04
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5. Application No.202311004924 A. Publication Date : 26/07/2024. No. of Pages : 29 No. of Claims : 4

- Organized International world food day with innovative receipes prepared by botany students.
- Digital Class Testing and Automated Evaluation through Google Forms.
- Educational games should be incorporated which align with teacher's lesson objectives. Positive reinforcement enhances participation of the students and increases enthusiasm for learning. Quizzes must be integrated into lessons and an element of competition should be added.
- Uploaded Video Lectures of two Subjects in youtube channel.
- Project-Based Learning (PBL): Encourage students to work on real-world projects that integrate various subjects, fostering critical thinking and collaboration.
- Peer Teaching: Allow students to teach each other concepts they've mastered, reinforcing their understanding and building confidence.
- Use of Technology Tools: Integrate apps and tools (like Kahoot, or Google Classroom) to facilitate interactive lessons and assessments.
- Lab Training program for laboratory staff.
- Innovative Teaching Ideas:
 1. Gamification: Incorporate game-like elements into lessons to make learning more engaging and fun.
 2. Project-Based Learning: Assign students real-world projects that require them to apply their knowledge and skills.
 3. Flipped Classroom: Have students watch lectures or videos at home and use class time for discussions, activities, and problem-solving.
 4. Peer Teaching: Encourage students to teach each other concepts they have mastered.

5. Use of Technology: Utilize tools like interactive whiteboards, educational apps, and online resources to enhance learning experiences.
6. Differentiated Instruction: Tailor instruction to meet the individual needs of different students.
7. Real-World Connections: Relate classroom material to real-world examples to make it more relevant and meaningful.
8. Outdoor Learning: Take classes outside to learn about nature, science, or history in a hands-on way.
9. Growth Mindset: Foster a positive and growth-oriented mindset in students to encourage resilience and perseverance.
10. Collaborative Learning: Promote teamwork and cooperation among students through group activities and projects.

- Flipped classroom: Students watch lectures or videos at home and engage on activities or discussions in class
- Presentations, assignments and class tests on different topics related to subject should be given to students in online and offline mode of teaching. Students should be taken to visit different historical buildings and places to understand art and architecture of past.
- For the upliftment of college sports and overall fitness of students we can introduce theme-based intramurals where every week or month will focus on a particular theme, such as "Olympic Week" (different Olympic sports), "Retro Sports" (classic games like dodgeball, tug of war), or "Outdoor Adventure" (Rafting, Kayaking & Canoeing, Mountaineering courses etc).
- Established Yuva Tourism Club at Vallabh Govt. College, Mandi.
- Organised variety of outdoor activities for students of Vallabh Govt. College, Mandi.
- Registered 'Yuva Tourism Club, Vallabh Govt. College, Mandi' as club under 'Yuva Tourism Club' initiative of Ministry of Tourism, Govt. of India.
- Use of ICT tools and techniques in education: The class of environment science make best use of the technology to cater the needs of large strength of students. Projectors and powerpoint presentations are being used for classroom teaching with voice amplification tools to make it audible clearly to the student sitting on last bench.

- Youtube Channel for students: An initiative have been taken to create a youtube channel named as " Environment matters" where all the classroom topics are provided in the form of recorded powerpoint lectures to easy revision by the students. Along with the syllabus the students are also being made aware about the various environmental issues through short videos, shorts and reels etc.
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https://youtu.be/7YDEHNvI_h8?si=T3dWn3ITr8KPbHBi
- Started seminar series on Environment Science for students. The objective of the activity was to enhance students' academic engagement, strengthen their subject knowledge, and improve their presentation and communication skills. Students were allowed to choose a topic of their interest from the field of Environment Science. They prepared detailed presentations and delivered them in a classroom environment. Each student was allotted 8–10 minutes for the presentation followed by 5 minutes for questions, discussion, and feedback. The seminar series provided students with an opportunity to gain confidence, face an audience, and articulate their understanding of key environmental issues.
- Organized orientation and refreshed programme in the college.
- Use of google classrooms for attendance during covid period.
- Use of Microphone with speaker in classroom for better reach to students.
- Teacher focus on enhancing, engagement, improving learning outcomes and integrating technology.
- Flipped classroom, Project based learning, Gamification, Differentiated instruction, Technology integration, Peer teaching, Service learning, Socratic Seminars play very role in quality education.

- Every teacher should teach regularly using ICT and colleges should have biometric attendance for students.
- Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences and apply it to their daily lives. They must make what they learn part of themselves. Active learning essentially strives to make students understand the concept that needs to be covered to fulfil the outcomes. In this type of setting, the focus entirely shifts from the lecture to activity. There should not be more than 20% of lecturing in any class and rest of the 80% should be spent on student activities.
- Use of Self made PPTs , group discussion, formation of mathematics club , sharing the history of mathematician application of Mathematical topics, application of maths in daily life and in different disciplines like mathematical modeling of different problems or phenomenon like mathematics behind musical notes, blood flow in human body etc.
- Helping students for competitive exam through IT Source.
- Problem-based learning (PBL): Helps students develop problem-solving skills, higher-order thinking, and self-directed learning.
- Flipped classroom: Inverts the traditional classroom structure by moving in-class instruction to at-home practice.
- Inquiry-based learning: Students formulate their own understanding through research and questions.
- Collaborative learning: Helps students develop critical thinking and collaborative skills.
- Blended learning: Uses computers to provide more accurate learning and access to knowledge.
- Personalized learning: Tailors teaching to each student's unique needs, strengths, talents, and interests.
- Active learning: Students are engaged and participate in class discussions.
- Gamification: An enjoyable way to inspire students and enhance their learning.
- Peer teaching: Helps develop reasoning and critical thinking skills, and can also improve self-esteem and interpersonal skills.

- Teachers can give innovative ideas but due to lack of fund, non co-operative attitude of govt, they can't be implemented. Except special cases, 90 percent attendance should be made mandatory to appear in exams for the students and the last date for taking admission to college should be fixed and it should not be changed about five times.
- Promotion of innovation and entrepreneurship through (Growing and selling of nursery plants by students of skill course) Incubation Cell (2025).
- MOOCs and hybrid mode learning.
 1. Flipped Classroom – Ghar par padhna, class mein practice.
 2. Gamification – Game jaisa learning (points, badges).
 3. Project-Based Learning – Real-life projects se seekhna.
 4. Learning Stations – Group activities ke liye rotating stations.
 5. Peer Teaching – Students ek-dusre ko padhate hain.
 6. Digital Storytelling – Videos/animation se ideas explain karna.
 7. Choice Boards – Students ko apna learning option chunne dena.
 8. Augmented Reality – AR apps se lessons ko interactive banana.
 9. Mindfulness Breaks – Short relaxation/focus activities.
 10. Genius Hour – Students ko apne interest ke projects karne ka time.
- Teaching innovative ideas involves shifting from passive lectures to active, student-centered methods, focusing on engagement, critical thinking, and real-world application through strategies like Project-Based Learning (PBL), Flipped Classrooms, Gamification, and Inquiry-Based Learning, integrating technology (Blended/Multimedia), and fostering collaboration (Think-Pair-Share, Jigsaw) for deeper understanding and relevant skill-building.
- Key Innovative Methods
- Project-Based Learning (PBL): Students work on complex, real-world projects, applying knowledge and solving problems collaboratively.
- Flipped Classroom: Deliver lectures/content at home (videos), use class time for active problem-solving and discussion.
- Gamification: Apply game elements (points, badges) to learning to boost motivation.
- Inquiry-Based Learning: Students drive their learning by asking questions and investigating topics.

- Experiential Learning: Hands-on, immersive experiences (simulations, role-playing) for direct engagement.
- Blended Learning: Mixes traditional teaching with online learning components.
- Personalized Learning: Tailors content, pace, and approach to individual student needs.
- ***Digital Class Testing and Automated Evaluation through Google Forms***

The Chemistry undergraduate classes in the college have large student strength, making it challenging to conduct frequent assessments, evaluate them in time, and provide individual feedback. Traditional paper-based tests require substantial time for checking, delay feedback, and are difficult to manage when the class size is high.

To ensure continuous assessment, timely feedback, and enhanced student engagement, I have introduced Google Forms-based class tests as an innovative and efficient teaching-learning practice.

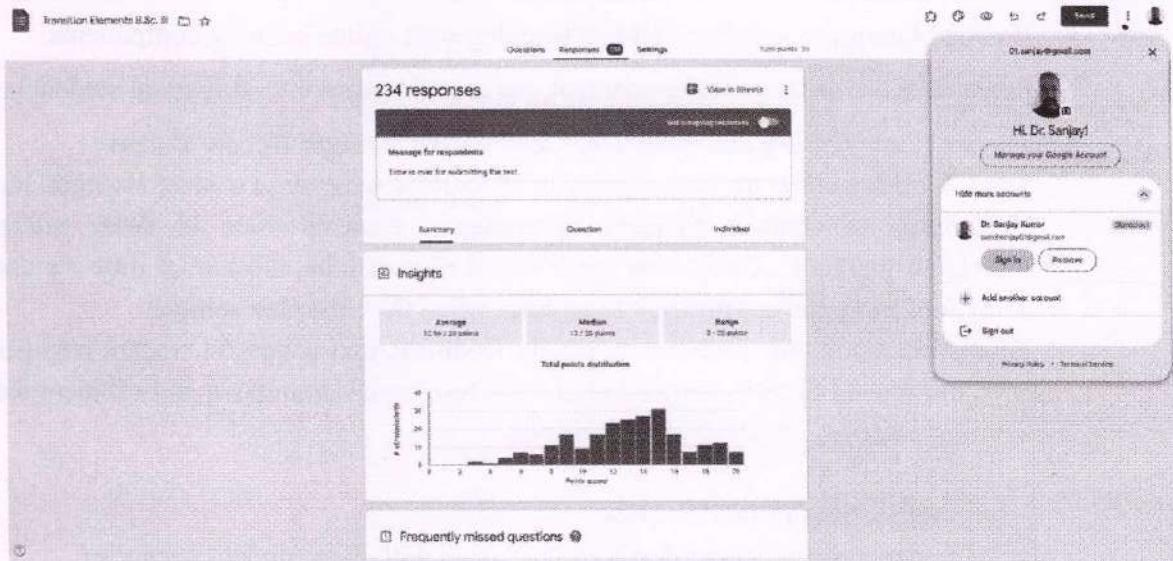
Objectives of the Practice

1. To manage assessments effectively in classes with large student strength.
2. To provide instant evaluation and feedback to students.
3. To enhance student participation by using digital tools familiar to them.
4. To reduce the burden of manual checking and allow more time for academic support.
5. To use class test data for identifying learning gaps and planning remedial teaching.

Mode of Administration

Short quizzes (20-25 questions) were created using MCQs, short answers, numerical problems, and conceptual questions. Forms were enabled with automatic answer keys, scoring, and feedback options. Tests were designed to evaluate mainly application-based understanding. Tests were shared with students through classroom WhatsApp groups and Google Classroom. Time-bound submissions ensured discipline and seriousness. Students could access the test from mobile phones, making the process inclusive. After submission, students instantly received: Their score, correct answers and Explanatory feedback. The teacher received a consolidated spreadsheet of all responses, which facilitated quick analysis.

SCREENSHOTS OF THE CLASS TESTS



Transition Elements B.Sc. III

234 responses

Message for respondents: Time is over for submitting the test.

Summary Question Individual

Insights

Average: 12.66/20 points | Median: 12.7/20 points | Range: 3 - 19 points

Total points distribution:

Frequently missed questions:

Hi, Dr. Sanjay!

Manage your Google Account

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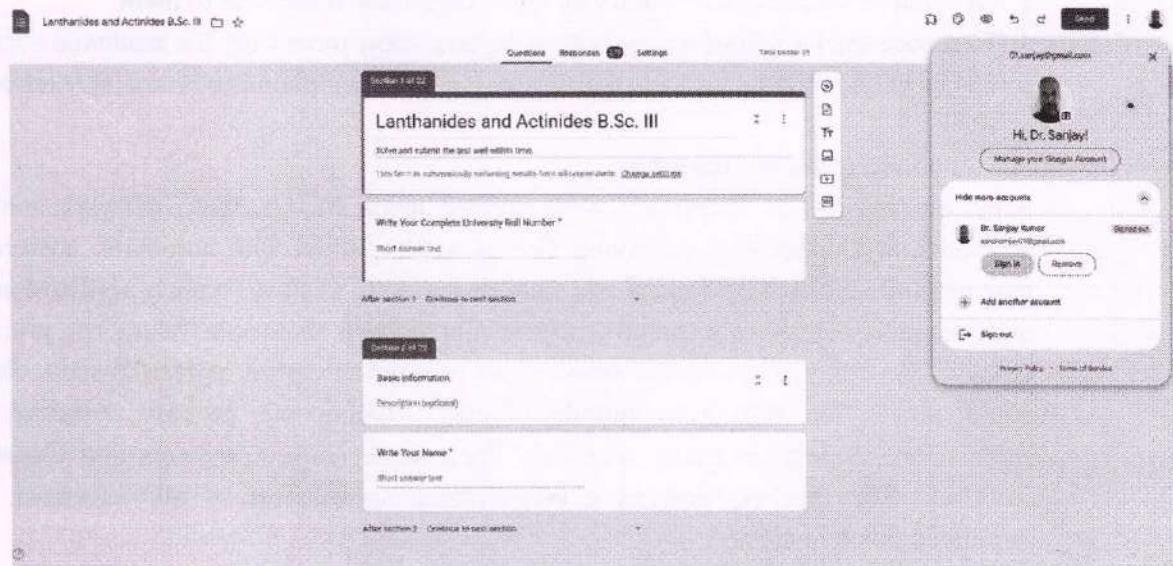
Dr. Sanjay Kumar (sanjayp19@gmail.com) Selected

Sign in Remove

Add another account

Sign out

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Lanthanides and Actinides B.Sc. III

Start and submit the test well within time.

Take time in understanding marking results from all experiments. Q36994058

Write Your Complete University Roll Number *

Start answer test

After section 1 - Continue to next section

Section 2 of 2

Basic information

Description (optional)

Write Your Name *

Start answer test

After section 2 - Continue to next section

Hi, Dr. Sanjay!

Manage your Google Account

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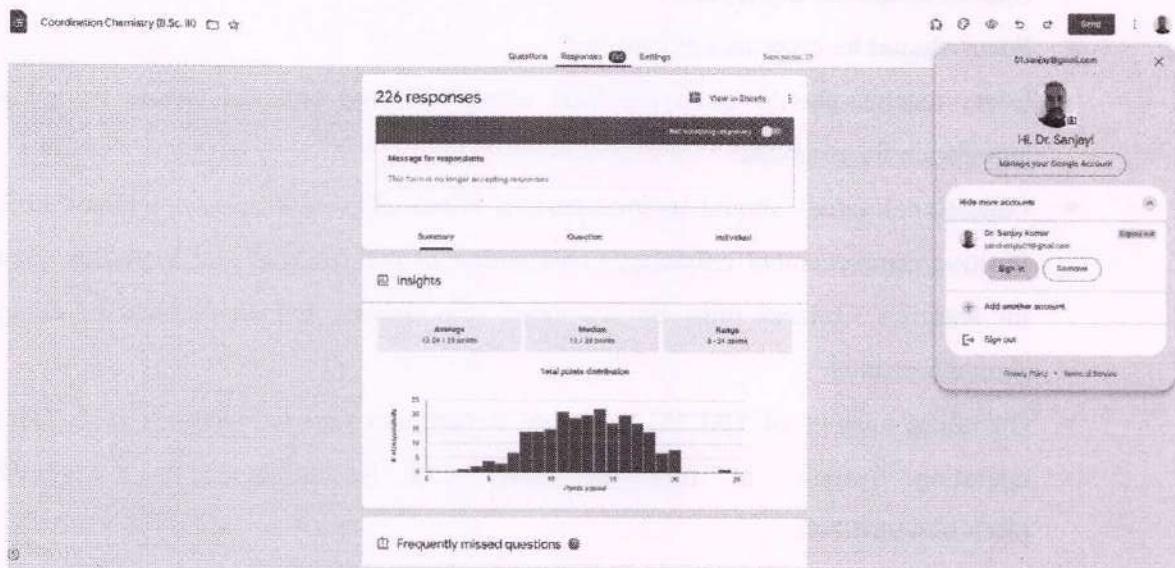
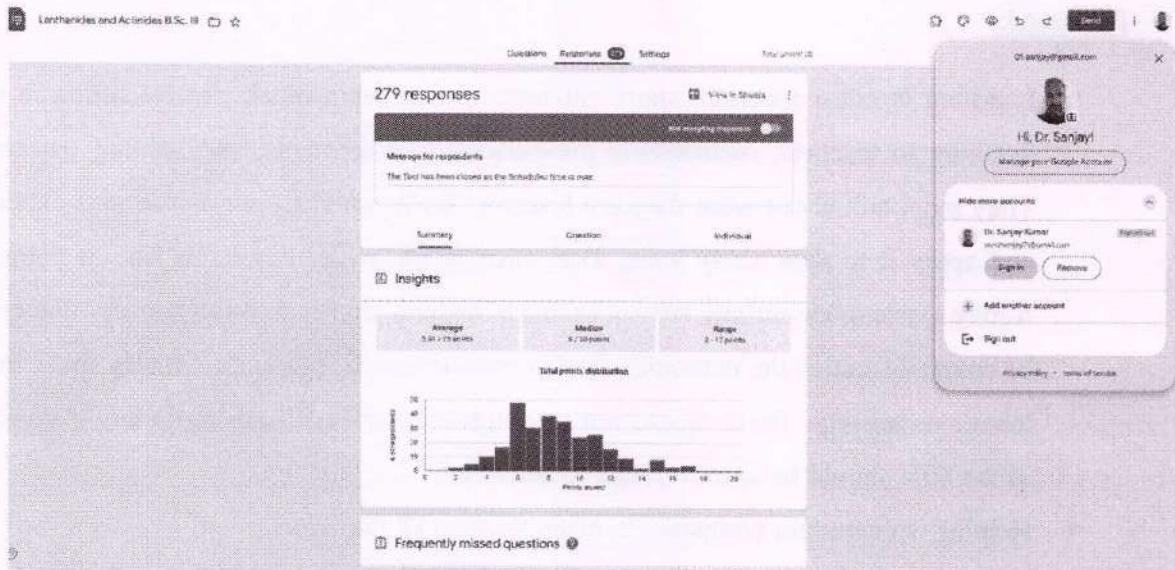
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- MOOCs and hybrid mode learning.

Proposed:

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- Helping students for competitive exam through IT Source
- Profess secular thoughts among people and uplifting their educational understanding
- Classes should be digitalized
- Focus should be on practical learning"
- Every teacher should teach regularly using ICT and colleges should have biometric attendance for students.
- Educational games should be incorporated which align with teacher's lesson objectives. Positive reinforcement enhances participation of the students and increases enthusiasm for learning. Quizzes must be integrated into lessons and an element of competition should be added.
- Operating system of Old PC in every department can be replaced with Linux free operating system. In this way they can be utilized for C++/FORTRAN pROGRAMMING
- "Project-Based Learning (PBL): Encourage students to work on real-world projects that integrate various subjects, fostering critical thinking and collaboration.
- Peer Teaching: Allow students to teach each other concepts they've mastered, reinforcing their understanding and building confidence.
- Use of Technology Tools: Integrate apps and tools (like Kahoot, or Google Classroom) to facilitate interactive lessons and assessments."
- 10 Innovative Teaching Ideas
 - Gamification: Incorporate game-like elements into lessons to make learning more engaging and fun.

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