

भौतिक अनुसंधान प्रयोगशाला

(भारत सरकार, अंतरिक्ष विभाग की यूनिट)

नवरंगपुरा, अहमदाबाद—380 009, भारत.



Physical Research Laboratory

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Navrangpura, Ahmedabad—380 009, India

National Science Day 2025

Innovations in teaching by Teachers: Presentation by Teachers

Teaching and learning process of abstract science topics through innovative aids/models are an integral component in any classroom. It not only helps reinforce a skill or concept but also relieves monotony or boredom by presenting information interestingly and excitingly by engaging all the senses of students.

Good teaching and pedagogical tools/models/aids play a pivotal role in enhancing the learning of difficult science topics. Many teachers are involved in making science teaching models/aids and improvised apparatus for demonstrations in their classrooms. However, their isolated efforts in the schools often do not get recognition on any platform except for their schools.

Over the years, PRL has invited teachers to accompany student participants during National Science Day celebrations. This year, however, PRL is taking a step further by introducing a new initiative that actively involves teachers. The activity, titled “Innovations in Teaching by Teachers,” aims to provide educators with a platform to showcase their creative approaches in developing and utilizing innovative science teaching models and aids. Additionally, it offers an opportunity for teachers to learn from one another and exchange valuable insights.

OBJECTIVES

- To encourage teachers to give creative and innovative classroom demonstrations.
- To provide a platform for teachers to demonstrate unique pedagogical approaches and ideas with their peers.
- To highlight the importance of teaching material and pedagogical tools in the teaching-learning process.
- To appreciate and encourage novel methods and/or techniques originally developed and practised by teachers

Methodology :

1. Entries for the presentation are invited only from selected schools for participation in NSD 2025.
2. Only one entry/ proposal is allowed from one school. The model presented should be either original or have an identifiable innovation incorporated.
3. A brief proposal explanation with a title and pictures should be submitted online using a link <https://forms.gle/9iAyhfMxMK33jgFp7> on or before 15 February 2025.
4. Among all the entries received, six to ten proposals will be selected. Selected proposals will get a confirmation by 25 February 2025. The chosen teacher will present the work for 5 to 10 minutes in a classroom-like setting . The participants will make an oral presentation and demonstrate using the teaching aid/material/model. The oral presentation will include all the information given in the short write-up.

5. **The model proposed could be on any specific topic in any branch of science at the high school level (11 and 12 standards).**
6. The teaching aid/material has to be prepared or created by an individual teacher. It may encompass material and other physical means/infrastructure/ tools/ apparatus/ equipment used by the teacher to deliver a lesson, support student learning, engage students to acquire knowledge in different ways and facilitate learning outcomes.
 7. The teacher should try to teach at least one concept of their interest clearly and thoroughly through Presentation or demonstration.
 8. The teaching aid/material may be a visual aid/audio aid/audiovisual aid, projected or non-projected. So the teaching aid/material may be a chart, game (board/file folder/any other), puppets, cartoon(s), mobile technology, models, cards, videos, etc. The use of hazardous materials and chemicals is prohibited due to security reasons.
 9. The items or the material used to prepare or create the teaching aid/material shall be purchased/ designed by the teacher himself/herself / computer-generated / any other and is readily available. The use of biodegradable or recycled products/materials in making teaching aids shall be appreciated.
 10. The participating teachers/ schools have to bear all the expenses related to participation in the competition. They have to make their travel and stay arrangements.
 11. The participants will have to bring their supporting material, e.g., laptop, internet connection, tapes, charts, etc., to display their teaching aid/material, and details of the same need to be sent to PRL via email (sciday@prl.res.in).
 12. The merit of the activity is to see how effectively and interestingly the Topic is taught and how deeply and quickly the students understand it.
 13. All presentations will be given an appreciation prize and a certificate.
 14. Teachers must submit a maximum one-page write-up (in PDF format) describing the model/teaching aid. The headline of the document should specify the Topic.

Presentation Objectives (suggestive)

The teaching aids can be presented with the following objectives:

1 Originality and Creativity

2 Adaptability - Easy to make, cost-effective, time-efficient and the material used

3 Ease of use – Easy to use and demonstrates usability in classroom settings

4 Educational Significance/ Instructional Appropriateness - The model/ aid/ material prepared/ created/ developed is appropriate; encompasses the significance of teaching the Topic on which the aid has been made; matches the grade level of the target audience and supports their learning or facilitates achievement of learning objectives.