Innovation and Science Promotion Foundation (ISPF)

ISPF

ANNUAL REPORT

2022-2023

ABOUT ISPF

The Innovation and Science Promotion Foundation (ISPF) is a non-profit trust that fosters innovation and scientific curiosity among school children. The foundation prioritises establishing experiential learning initiatives, providing hands-on opportunities for individuals to engage with science through interactive experiences that ignite a passion for innovation.

ISPF collaborates with partner schools to deliver experiential science learning programmes. These programmes encourage students to actively create, experiment, tinker, and innovate. The overarching goal is to instil a deeper understanding of scientific phenomena and enhance cognitive life skills. Through these initiatives, ISPF strives to empower the younger generation with practical and inspiring learning experiences in the realms of innovation and science.

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OUR MISSION

Our goal is to make experiential science learning accessible to everyone. We design learning opportunities centered on hands-on experiences that inspire innovation. In pursuit of this mission, we:

- Relate science and mathematics to everyday life, bridging the gap between theoretical concepts and real-world applications through experiential activities.
- Guide children to embrace the thrill of innovation, encouraging them to identify problems, test solutions, and persist until they successfully solve challenges.
- Highlight innovations, particularly grassroots initiatives in areas like health, ecology, building sciences, and agriculture, showcasing the practical impact of scientific advancements.
- Cultivate an interest in pursuing science, fostering open minds and curiosity. Our aim is to empower learners to challenge norms, ask questions, and explore the wonders of the scientific world.
- Provide a dedicated space for children to engage, explore, and innovate, revolutionizing the landscape of science learning for everyone. Our vision is to create an environment where science becomes an exciting journey for all individuals.

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RAMAN CLUB PROGRAMME

The Raman Club programme is centred around experiential science activities. Children actively engage in practising the processes and tools introduced through the programme. This approach enhances the program's uniqueness and appeal, thereby making it highly accessible for children and teachers. ISPF is committed to training a dedicated group of educators known as Raman Club Mentors through the Raman Club program. These mentors will then guide children in implementing the Raman Club programme, providing ongoing support and follow-up to reinforce the processes introduced. As children actively participate in these activities, they expect their exploration to lead to innovative projects. These innovations can be submitted to the Raman Awards competition, with mentors offering assistance if needed.

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STAGES OF THE RAMAN CLUB PROGRAMME

- **Selection of Schools**

The implementation initiates with the identification of state government schools across urban tier 1, urban tier 2, and rural regions. The deliberate inclusion of diverse geographies is intended to introduce a range of perspectives and experiences into the program.

- **Training for the Raman Club Mentors**

Mentors participate in a two-day training to immerse themselves in the Raman Club program experience. Each geography allotted a training location to help minimise travelling for the mentors.

- **Delivery of the experiential science activity kits**

Every Raman Club is provided with a starter kit, including individualized activity kits for each child, ensuring active participation for every participant. Each child also receives activity sheets for recording their observations.

- **Support for the Raman Club Mentors**

All mentors are granted access to the in-house developed digital Customer Relationship Management (CRM) platform by ISPF, along with real-time support through WhatsApp.

- **School Exhibition**

Each club will organise an exhibition, extending invitations to students and parents from their school and neighbouring schools. The evaluation will involve external judges selected in collaboration with field partners from nearby schools. Judges will be furnished with rubrics to assess the exhibits, and the top 10 projects will be chosen for the Raman Awards. Mentors will support these ten children in submitting their innovations for consideration in the Raman Awards.

IMPLEMENTATION OF RAMAN CLUBS

State	District	Taluk	Number of State Govt Schools
Karnataka	Chikamagaluru	Sringeri	5
	Vijayanagar	Harpanahalli	4
	Davangere	Harihara	12
	Dharwad	Dharwad	8
	Bangalore	Bangalore	14
	Hassan	Channarayapatna	2
	Hassan	Hassan	2
	Hassan	Halebeedu	1
	Hassan	Malur	1

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We collaborated with 49 schools covering grades 3-10, with a total of 6829 students

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Raman Young Science Innovator Award (RAMAN AWARD)
www.ramanaward.org

Organisers
The Raman Award was instituted by the Raman Research Institute Trust and the Innovation and Science Promotion Foundation (ISPF).

Vision
The vision is to -

- Foster early interest in Science
- Nurture a curiosity for Science among young minds
- Promote the exploration of scientific principles in a creative and accessible manner.
- Seeks to portray Science as an enjoyable and engaging activity that can be explored using simple materials anywhere.
- Encourage more children to pursue STEM careers.

Eligibility & Process

- Commemorating the discovery of the Raman Effect on February 28, 1928, the award is open to all students in grades III to X. Participants are encouraged to create hands-on science activities illustrating a principle within the chosen topic. They may submit working models, toys, or experiments that effectively demonstrate a scientific concept.

Age Group

- The award is divided into three age groups:
- Junior (3rd & 4th Standard)
- Intermediate (5th to 7th Standard)
- Senior (8th to 10th Standard)

Prizes

- ₹20,000 for One Winner in each Category
- ₹5,000 for One Runner Up in each Category
- All awardees will receive an Annual ThinkTac program subscription.

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Participants data

1. Number of Stage 1 participants- 2387
2. Number of Stage 2 participants- 864
3. Number of finalists- 107

4. All winners - Mathangi Parthasarthy, Vighnesh Navso Shetye, Surendira G,Saanvi Pandey, MandarMohanKolhatkar, Mansimar Singh Rawal, Madhura S S, Kartikey Jain, Aadya Jayesh Gunjikar

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REGIONAL RAMAN AWARD

Event : Raman Club Finals
Date : 28th February 2023
Venue : Raman Research Institute (RRI), Bengaluru
Chief Guest : M. Madan Gopal, Ex- IAS Officer, Former Additional Chief Secretary of Karnataka.

The final event of ‘Raman Club’ was combined with ‘National Science Day’ i.e, 28th February 2023 organised by Raman Research Institute. The 50 finalists from 5 districts got an opportunity to exhibit their models on the ‘Open Day’. The event was started by registering the students from grade 5 and grade 10. The students were given name card stickers according to category wise i.e, intermediate category for grade 5,6 and 7 and senior category for grade 8, 9 and 10 students. Out of 50 students, 39 students were from the intermediate category and 11 students from the senior category. We noticed a reduced number of participation from the senior category due to pre-board exams for grade 10 and final examination for grade 8 students. Post registration, the students exhibited their models for nearly 2 hours.

During the second half of the event, a face to face contest was conducted for intermediate and senior students to select 3 winners from each category. The facilitators from the ISPF team guided students to work on the ‘Water Spray Model’ TACtivity for grade 5,6 and 7 and ‘DC Motor’ TACtivity for grade 8, 9 and 10. The model making instructions was provided by the ISPF facilitators team. After assembling their models, students were asked to identify the variables in the TACtivity and work individually on the problem statements. The contest lasted for nearly 2 hours. Thereafter students were evaluated by ISPF facilitators and Synopsys team. In the meantime, the chief guest interacted with the participants and rewarded them with participation certificates. Simultaneously, teachers were requested to assemble in the lecture hall to share their feedback about the ‘RISE’ programme. Many teachers appreciated about the programme especially highlighting about concept of identifying variables and applying to the TACtivities. This indicated that students were able to innovate and connect the scientific concepts to their models. After that, teachers and volunteers were rewarded with the certificate of appreciation for mentoring their students in this programme by the chief guest.

In the concluding part of the event, participants and teachers gathered for the award ceremony at the auditorium. The chief guest spoke about the importance of education for the current generation of students and emphasized on activity based learning methods to be implemented in the classroom teaching. Also, a short video was played about implementation of ‘Raman Clubs in Government Schools of Karnataka’ during the award ceremony. At the end of the event, the 6 winners from intermediate and senior category were awarded with certificates and gifts. Refer Annexure F for the names of the participants for the final event, list of exemplary teachers and volunteers, schedule of various events on 28th February 2023.

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REGIONAL RAMAN AWARD

Registration Desk at ‘Raman Clubs Finals’, RRI, Bengaluru

Students from Harihara exhibiting the models on the ‘Open Day’, RRI, Bengaluru

Exhibition of science models on the ‘Open Day’, RRI Bengaluru

Explaining the magnetic properties using ‘DIY Electroscope’, Bengaluru Students, RRI

Visitors interacting with the students on the ‘Open Day, RRI, Bengaluru

Demonstrating straw propeller activity to the school students, RRI, Bengaluru

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Contest for the participants, Library building, RRI, Bengaluru

Facilitators from ISPF team demonstrating the rules of the contest, Library building, RRI, Bengaluru

Demonstrating making of ‘Water Spray Model’ by facilitators from the ISPF team, RRI Bengaluru

Preparing ‘Water Spray Model’ by intermediate students, RRI, Bengaluru

Participants from senior category making a model on ‘ DC Motor’, RRI, Bengaluru

Testing ‘Water Spray Model’, RRI, Bengaluru

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Judges evaluating intermediate students, RRI, Bengaluru

Evaluation of senior students by the judges, RRI, Bengaluru

M.Madan Gopal, Chief Guest, interacting with the participants, RRI, Bengaluru

Javeriya Falkeen, Grade 8, Receiving participation certificate from the Chief Guest, RRI, Bengaluru

Feedback session from the teachers and volunteers about the programme, Lecture Hall, RRI, Bengaluru

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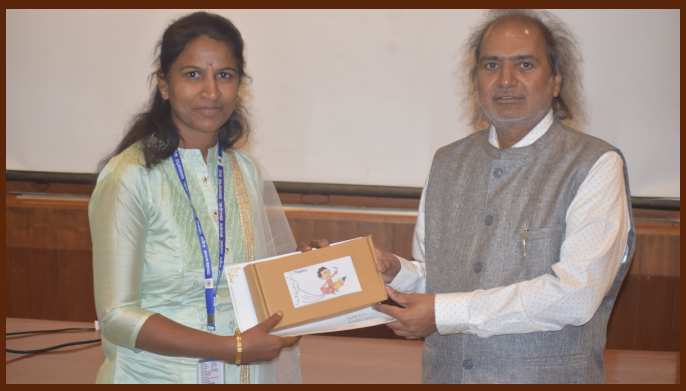

Rewarding Mrs. Manjushree as ‘Exemplary Teacher’ for inculcating scientific learning in students for the Raman Club Programme, Lecture Hall, RRI, Bengaluru

Rewarding Ms.Sneha G K, ISPF Volunteer, for mentoring students of Raman Club, RRI Bengaluru

Participants and teachers gathered at the auditorium for the ‘Award Ceremony’, RRI Bengaluru

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REGIONAL RAMAN AWARDEES

Priyanka Ayatti, Winner - Intermediate, MPKGS Hebballi, Dharwad

Latha C B, Runner-Up - Intermediate, GHPS Nagenahalli, Harihara

Kiran Kallur, Runner-Up - Intermediate, HPS Narendra, Dharwad

Prajwal K, Winner - Senior, AMKV Thoduru, Harpanahalli

Tejaswini B, Runner - Up - Senior, GHS Bilsanuru, Haihara

Jeevanmukhi Girish, Runner-Up - Senior, KPS Malleshwaram, Bengaluru