



# VIPNET NEWS

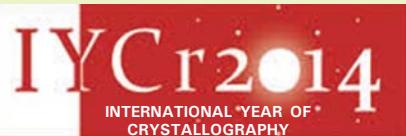
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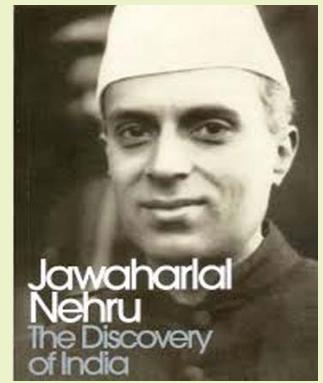
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Club Speak



## Fostering Scientific Temper

'Fostering Scientific Temper' is the theme chosen for this year's National Science Day (28 February 2014) by the Department of Science and Technology (DST). Year-long programmes and activities will be built around the theme. It is interesting to know the phrase 'Scientific Temper' with its current attributes was first articulated by Pandit Jawaharlal Nehru in his famous book *Discovery of India* (1946) wherein he said: "The scientific approach and temper are, or should be, a way of life, a process of thinking, a method of acting and associating with our fellowmen". Nehru relentlessly expanded the notion of scientific temper and strived to convince political and scientific leaderships to inculcate scientific temper among citizens. However, this discourse is rooted in the pre-Nehruvian era. Though the term scientific temper was not in use, many social reformers, scholars and scientists advocated the need to instil a spirit of scientific enquiry in the society. The tradition of scepticism and humanism had been part and parcel of Indian intellectual tradition. Such notion goes back to antiquity – Jain, Sankhya and Buddhist traditions have repeatedly emphasised the spirit of inquiry. It was during the Indian Renaissance that the notion of scientific inquiry was popularised and became part of Indian ethos.



Jawaharlal  
Nehru  
*The Discovery  
of India*

Nobel Laureate Prof. Amartya Sen's book *The Argumentative Indian*, also makes us realise that scientific temper has been the hallmark of Indian thoughts since long. This demolishes the notion that scientific temper is a western concept brought to us by the colonizers. After independence, India's political, scientific and technological aspirations were expressed in the Scientific Policy Resolution passed by the Indian Parliament in 1958. It committed the nation to build a scientifically tempered and technologically advanced society. The resolution recognised the democratic character of science.

The Post-Nehruvian period witnessed the Government's commitment in science and technology policy statements and the 42nd constitutional amendment. In 1981, a statement on scientific temper was issued by a group of intellectuals led by P.N Haksar, which evoked support as well as criticism from different quarters. India re-emphasised the importance of scientific temper and the resolution to build self confidence and pride in national capacity in 1983 by reiterating its firm commitment to scientific temper "*To ensure that the message of science reaches every citizen of India, men and women, young and old, so that we advance scientific temper, emerge as a progressive and enlightened society. In India scientific temper will be fully integrated with all sphere of national activity*". The inculcation of scientific temperament was added as a fundamental duty under Article 51 (A) (H) by the 42nd constitutional

**We cannot solve our problems with the same thinking we used when we created them.**

Albert Einstein

amendment, "to develop the scientific temper, humanism and spirit of inquiry and reforms". In 2011, again an attempt was made to revisit the 1981 scientific temper statement and the outcome was a revised statement, now known as the "Palampur Declaration". This was followed by two international conferences and workshops, which built upon the conceptualisation of scientific temper as well as a plan of action to promote it.

The latest Science, Technology and Innovation policy of 2013 also stresses on "promoting the spread of scientific temper amongst all sections of society" as the first objective.

This commitment has gone a long way in making an impact on every sphere of our life in the past 70 years, which is quite apparent in the marked change of social fabric of India, coupled with the combined result of the liberalisation in economy and phenomenal growth in the field of information technology. Literacy in the country has grown significantly over the years. The reach of media has also increased significantly. The number of individuals, organisations, and agencies involved in science and technology (S&T) popularisation has also gone up phenomenally in our country. Over all, India's achievements in the area of S&T are very impressive.

This process of development, unfortunately, has not brought commensurate change in the traditional outlook of the people. Old faiths and beliefs based on unscientific prejudices and habits still persist and dominate thought process of a large number of people. Ironically, the latest IT technology is being used to also propagate anti-science beliefs. Today, we have a large number of religious channels, but there is not a single Indian science channel. It does seem a bit paradoxical, even after putting in the best of our efforts to inculcate a rational outlook and scientific thinking among citizens for many years, we find ourselves where we began, like Alice

and Red Queen remaining under the same tree, however fast they ran for whatever time. We still find many cases, often reported by media, where a person or a group of persons is misguided or cheated by so called Godmen, claiming to possess supernatural powers. It is tragic that often educated citizens and people with scientific background lack scientific temper. This explains why our efforts directed towards inculcation of scientific temper, development and harmony meet with only limited success and we have a long way to go.

Nehru, believed in freedom of speech and, "scientific temper. By speaking of a nation with scientific temper, he wanted to speak of people of a nation who would be able to think independently, understand and practice scientific method in daily lives, analyse and not take statements at their face value, and avoid simplistic reasoning. In fact it was important to not just change the economic status of people, but also influence change in their attitude or narrow-mindedness.

The debate is still on to define the meaning of scientific temper and several attempts have been made to address the same in the form of statements and international seminars/workshops organised. The issues have been discussed and debated at several other fora as well. According to Srirupa Roy in her book *Beyond Belief: India and the Politics of Post-colonial Nationalism* (2007) observed " Nehru's emphasis on the need for Scientific Temper pre-dated independence" (p. 123). As Roy elaborated further, the feature of scientific temper are mainly two-fold:

1. " **Scientific** temper refers to a mentality or an outlook rather than a specialised body of knowledge. It addresses itself to universalists' concern of "Value of life" rather than to narrow and specialised question of scientific research and application (p.124)
2. Unlike scientific expertise alone, scientific temper is a call for diffusion of scientific mindedness

### **Nehru first defined and elaborated the concept of scientific temper in *The Discovery of India*, making the following salient points (Nehru, 1946:509-15):**

\* There is an element of inevitability about the applications of science and technology. However, mere applications of science and technology will not be a sufficient condition. What is needed is 'the scientific approach, the adventurous and yet critical temper of science, the search for truth and new knowledge, the refusal to accept anything without testing and trial, the capacity to change previous conclusions in the face of new evidence, the reliance on observed fact and not on pre-conceived theory, the hard discipline of the mind — all this is necessary, not merely for the application of science but for life itself and the solution of its many problems.'

\* Scientific temper is the temper of a free man.

\* Scientific approach should be an integral part of our social interactions, as expressed by the quote "The scientific approach and temper are, or should be, a way of life, a process of thinking, a method of acting and associating with life, a process of thinking, a method of acting and associating with our fellowmen."

\* While we live in a scientific age, there is no evidence of scientific temper in the people or their leaders.

Even scientists who practice science do not necessarily have scientific temper.

### India & Scientific Temper

- \* The concept of Scientific Temper was articulated first time by Pandit Jawaharlal Nehru in 1946 in his book *Discovery of India*, referring to it as " a way of life, a process of thinking, a method of acting & associating with our fellow"
- \* The tradition of scepticism and humanism had been part and parcel of Indian intellectual tradition. Such traditions go back to antiquity—Jain, Sankhya and Buddhist traditions have repeatedly emphasised the spirit of inquiry.
- \* During the Indian Renaissance the nation of scientific inquiry was popularised and became part of Indian ethos.
- \* The infrastructure of S&T in India can be described as the hardware, while scientific temper of the people is the software.
- \* In 1974, India became the first country to include in its constitution " Scientific temper" with humanism as fundamental duty of all citizens of the country (Article 51-A(H).
- \* In 1980, a group of academicians and intellectuals again deliberated at Coonoor on the state of scientific temper in the country. The outcome was "A statement on Scientific Temper" which was released in 1981. The statement touches upon areas of human cognition and action beyond the boundaries of science and impinge upon the domain of extra-science (Nehru 1945). The statement was expected to usher in a movement – a second Indian Renaissance – in India to provide the necessary fillip for restructuring our country embodying the aspirations of our people".
- \* In 2011, an attempt was made to revisit the 1981 scientific temper statement and the outcome was a revised statement, now known as the 'Palampur Declaration', followed by two international conferences and a workshop. (Third national seminar is being organised in February 2014) .

throughout the population. The growth of scientific temper is measured by the extent to which common people were using the method of science to life's problems (Roy, P. 125)

From the above, it is clear that science could not just play a role in building scientific expertise but also help reject superstitions, prejudices and injustice. Scientific attitude does not imply imparting or acquiring information alone. It also implies organising, analysing and applying the same in order to arrive at a solution or creating meaningful patterns leading to a systematic understanding of the natural processes or the understanding of the environment we live in— physical or social. Hence, for the development and growth of a society, the spirit of inquiry and scientific attitude need to be inculcated at every level in every system, at home, office or street—from the lowest to the highest functionary, from a child to parents and teachers.

However, it is very difficult to give a very precise definition of scientific temper as "the term might be a fuzzy notion at a given point of time"; the distinct features that characterise this term cannot be identified (Editorial, *Journal of Scientific Temper, Roza*) Vol 1 (3&4) July, P.77). They are changing across time and concepts as "Science and society evolves continually and therefore the relationship between the two is dynamic, non-linear, complex, and ever changing vis-à-vis a social structure", and so are the features of scientific temper that characterise them. So we can conclude that term scientific temper is not a static concept, but a set of broad values that touches areas of human

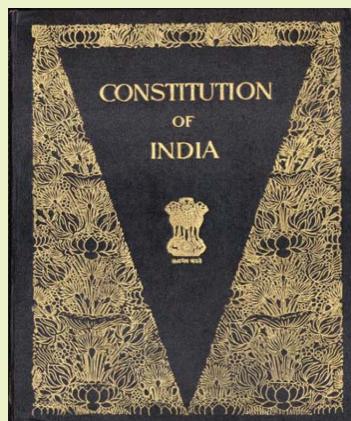


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cognition and action beyond the boundaries of science and impinge upon the domain of extra-science" as well (Nehru 1945).

Now India is in the process of launching several missions through her 12th five-year plan. The approaches, output, and outcome of these missions are designed to optimise synergies and impact across sectors. Statements of intent to foster scientific temper are also included in the plan of action of many States. We have to go a long way, as developing a scientific tempered society is a disintegrated continuous process. The

VIPNET clubs certainly can play a role for the fulfillment of this national agenda. Let the Vipnetian family synergize all its efforts for realising the constitutional mandate, i.e., to foster scientific temper in all sections of society.

***Vigyan Prasar calls upon very fellow citizen of the country to imbibe and spread scientific temper, humanism and spirit of inquiry and reforms.***

□ B.K. Tyagi  
[bktyagi@vigyanprasar.gov.in](mailto:bktyagi@vigyanprasar.gov.in)

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2. Subodh Mahanti, *Journal of Scientific Temper*, January, pp.46-62
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# मेंथा की खेती की उत्तम सस्य तकनीक : मुनाफे की खेती

हमारे देश में हर तरह की जलवायु मिलती है, यहां अधिक वर्षा वाले स्थानों से लेकर कम वर्षा वाले स्थान भी हैं। एक ओर बहुत ठंडे और बर्फ से ढके पहाड़ी क्षेत्र हैं तो दूसरी तरफ रेगिस्तान भी हैं। यहां नम-भूमि व समुद्र तटों से लेकर शुष्क मैदान भी पाये जाते हैं। ये सभी स्थान विभिन्न रूपों, गुणों वाले जीव-जन्तुओं व पेड़-पौधों को अनेक प्रकार का प्राकृतिक आवास उपलब्ध कराते हैं।

जैसा कि हम जानते हैं कि भारत एक महा जैव-विविधता वाला देश है। हमारे देश में ऐसे कई क्षेत्र हैं जहां लोगों की रोजी-रोटी खेती या इससे संबंधित उद्योग-धंधे, पर आधारित हैं। यहां फसल उगाने से लेकर कच्चे माल को तैयार करना व उसे अन्तिम उत्पाद का रूप देने तक सभी कार्य एक ही क्षेत्र में किये जाते हैं। ऐसी ही कुछ फसलों हैं-केला, रेशम, जूट, सुपारी, मैथा आदि।

विपनेट न्यूज की कोशिश रहेगी कि ऐसी कुछ फसलों व उनसे जुड़े उत्पादों की जानकारी आप तक पहुंचे। अगर आपके क्षेत्र में भी ऐसी कोई फसल है तो तुरन्त हमें अपना लेख भेजिए। इस लेख में हम मैथा से जुड़े उद्योग के विषय में जानकारी दे रहे हैं।

**भारत दुनिया के हॉट स्पॉट देशों में से एक है जो जैव विविधता के लिहाज से सबसे समृद्ध क्षेत्र है। इन 25 हॉट स्पॉट में से भारत के पश्चिमी घाट सहित श्रीलंका तथा भारत, बर्मा क्षेत्र (पूर्व हिमालय क्षेत्र) को मुख्य हॉट स्पॉट में रखा गया है।**

एनआई विविलोव जैसे प्रसिद्ध रुसी वनस्पतिविद् ने हमारे देश में पाई जाने वाली पादप प्रजातियों को ध्यान में रखते हुए इस क्षेत्र को हिन्दुस्तान सेंटर ऑफ ओरिजिन ऑफ कलिवेटेड प्लांट्स का नाम दिया-यानि अनेक खेती वाले पौधों का जन्म स्थान। इसी कारण हमारे देश की गिनती विश्व के 12 समृद्ध वनस्पति-क्षेत्रों में की जाती है।

इसी के साथ भारत में 26 एन्डेमिक यानि स्थानिक केन्द्र निर्धारित किए गए हैं। जो अब तक ज्ञात फूल वाले पौधों में से एक तिहाई का घर है। भारत में विश्व की केवल 2.4 प्रतिशत भूमि है। परन्तु यहां कुल जैव-विविधता का 7.31 प्रतिशत पाया जाता है।

गेहूं, दालें, तिलहन, नींबूवर्गीय फल, गन्ने बैंगन व ईलायती आदि फसलों में हमें असीम विविधता देखने को मिलती है।

भारत में धान की लगभग 50,000 से 60,000 किस्में उगाई जाती थी।

हमारे देश में मैथा की खेती की शुरुआत तीन दशक पहले हुई थी। वैज्ञानिकों के अधक प्रयास एवम उत्तम शोध कार्य के कारण ही, इतने कम समय में ही हमारा देश मैथा के उत्पादन एवं छेत्रफल की दृष्टि से विश्व में अग्रणी हो गया है। वर्तमान समय में मैथा की खेती उत्तर प्रदेश, उत्तराखण्ड, पंजाब, हरियाणा, बिहार आदि राज्यों में व्यापक स्तर पर की जा रही है। भारत में सामान्यतः इसकी खेती ग्रीष्म काल में 2.25 लाख हैक्टेयर में की जाती है, जिससे लगभग 25 मिलियन किग्रा। तेल प्रति वर्ष प्राप्त होता है। इसके तेल का उपयोग मुख्यतः दवाइयां, खाने की सामाग्री, प्रसाधन के सामान आदि के निर्माण में किया जाता है।

## पौध सामग्री : नसरी/पौध डालने का उपयुक्त समय:

**पौध दर किग्रा/हैक्टेयर :** सीधी बुवाई के लिए 200 से 300 किग्रा और रोपाई के द्वारा लगभग 60 से 70 किग्रा सकर्स प्रति हैक्टेयर की आवश्यकता होती है।

**उत्तम मृदा एव सस्य तकनीक:** मैथा की पौध के लिए बतुई दोमट मिट्टी होनी चाहिए, दो.तीन बार गहरी जुताई करने के बाद पाटा लगा देना चाहिए जिससे मिट्टी भुर-भुरी हो जाए। 3X1 मी. की क्यारिया बनाकर मैथा की जड़ के छोटे-छोटे टुकड़े (2-3 सेमी.) काट करके नसरी डाल देना चाहिए, एक हैक्टेयर के लिए पौध तैयार करने के लिए लगभग 500 से 700 वर्ग मी. छेत्र की आवश्यकता होती है।

**रोपण हेतु उत्तम सस्य तकनीक:** दो.तीन बार गहरी जुताई और पाटा लगा करके खेत को समतल कर देते हैं। मैथा की रोपाई 50X50 सेमी. पंक्ति से पंक्ति तथा पौध से पौध के बीच दूरी करनी चाहिए। मैथा में 10 टन गोबर की खाद और 100:50:50 किग्रा. इन. पी. के./हैक्टेयर की आवश्यकता होती है। नत्रजन की एक-तिहाई मात्रा पी. और के. की पूरी मात्रा आखिरी जुताई से पहले खेत में मिला देना चाहिए। बची हुई नत्रजन को दो बराबर भागों में रोपण के 25-30 दिन और 40-50 दिन बाद छिड़काव कर देना चाहिए। मैथा



मेंथा का तेल निकालने के लिए आसवन इकाई

रोपण हेतु पौध की आयु: नरसी डालने के लगभग 30-40 दिन बाद खेत में लगाने/ रोपड के लिए तैयार हो जाती है।

जनवरी-फरवरी का महीना मेंथा की पौध डालने के लिए सबसे उपयुक्त समय होता है।

मेंथा को पशु नहीं खाते हैं, अतः इसमें बकरियों आदि को चराकर खरपतवार का नियंत्रण कर सकते हैं।

**कटाई** एवम आसवन: मेंथा की फसल की कटाई रोपण के लगभग 90 दिन बाद करनी चाहिए। कटाई के दो दिन के अन्दर ही कटी हुई फसल से आसवन द्वारा मेंथा का तेल निकाल लेना चाहिए। मेंथा की फसल से पूरा तेल निकालने के लिए आसवन इकाई को कम से कम तीन घंटे चलाना चाहिए।

भारत में किसानों द्वारा उगाई जाने वाली विभिन्न फसलों में भी असीम व महत्वपूर्ण जैव-विविधता है। भारत में जो फसलें उगाई जाती हैं उनमें से 66 प्रतिशत प्रजातियां व उनके जंगली संबंधियों की लगभग 320 प्रजातियां स्थातिक हैं यानि उनकी जन्मभूमि भारत ही है।

की सिचाई समय-समय पर करते रहना चाहिए। सामान्यतः 7-10 दिन के अंतराल पर सिचाई करने पर कुल 8-10 सिचाई की आवश्यकता होती है। मेंथा की अच्छी फसल लेने के लिए, पहली खरपतवार निकासी रोपण के 20-25 दिन बाद और दूसरी खरपतवार निकासी रोपण के 40-45 दिन बाद करनी चाहिए।

**उत्पादन एवं लाभ:** मेंथा की एक हैक्टेयर फसल से लगभग 175-200 किंवदल हर्ब पैदा होता है और इसके आसवन के बाद लगभग 175-200

किग्रा. तेल प्राप्त होता है, जिसका बाजार मूल्य लगभग 1.75 से 2.0 लाख होता है (1000 रु/किग्रा)। एक हैक्टेयर मेंथा की खेती करने में लगभग 50,000 से 60,000 रु. का व्यय होता है। अतः मेंथा की खेती से लगभग 1.25 लाख से 1.5 लाख/हैक्टेयर का शुद्ध लाभ प्राप्त होता है।

□ राकेश कुमार उपाध्याय1, जे. आर. बहल1 एवं बी.के. त्यागी2

1वैज्ञानिक: सी.एस.आई.आर.-केन्द्रीय औषधीय एवं सांध्य पौधा संस्थान, अनुसन्धान केन्द्र, पंतनगर, (ऊधमसिंह नगर) उत्तराखण्ड,

2 वैज्ञानिक: विज्ञान प्रसार (डी.एस.टी.) नोएडा

E-mail: rkupadhyayfzd@yahoo.com  
bktyagi@vigyanprasar.gov.in

If you want to know more about Vigyan Prasar, its publications & software, besides the next moves of VIPNET Science Clubs, please write to us at the address given below:-



#### Vigyan Prasar

A-50, Institutional Area, Sector 62, Noida (U.P.) 201 309

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Website: <http://www.vigyanprasar.gov.in>

प्रत्येक भारतीय भवित्वों में एक साथ  
19 भारतीय भवित्वों के 117 केन्द्रों से  
आकाशवाणी

## अंको के खिलाड़ी

प्रत्येक उत्तरी भूमि के अन्त में  
इष्ट ग्रह भूमि के साथ जात  
देवता भवित्वों में भी  
एक आकाशवाणी पुस्तक



रेडियो धारावाहिक "अंको के खिलाड़ी" विश्व के महानतम् गणितज्ञों के योगदान एवं उनके संघर्षों की पृष्ठ भूमि पर आधारित है। 26-कड़ियों वाले इस रेडियो धारावाहिक का निर्माण विज्ञान प्रसार, राष्ट्रीय विज्ञान एवं प्रौद्योगिकी संचार परिषद् एवं आकाशवाणी ने संयुक्त रूप से किया है।



धारावाहिक में प्राचीन समय में भारतीयों द्वारा गणित के क्षेत्र में बहुमूल्य योगदान के साथ-साथ, पश्चिमी देशों के गणितज्ञों के अतुलनीय योगदान की झलक प्रस्तुत की गई है। यह उपलब्धियां उस समय अर्जित की गई, जब संसाधन बिल्कुल सीमित थे और विषय अपने न्यूनतम स्तर पर था। लेकिन इन गणितज्ञों ने कुछ परवाह न करते हुए विश्व को ऐसा नया ज्ञान दिया, जिसका प्रयोग आज हम सभी विषयों, कार्यों तकनीकियों में किया जा रहा है।



धारावाहिक का मुख्य उद्देश्य व्यापक रूप से आमजनों के मध्य गणित के प्रति समझ को विकसित करना है जिसका प्रयोग वह अपने प्रतिदिन के कार्यों में करते हैं और विशेषकर बच्चों के मध्य, विषय की गूढ़ता के कारण उनके मन में व्याप्त शंकाओं का समाधान महान गणितज्ञों के योगदान, जीवनियों एवं प्रेरक प्रसंगो से करना है जिससे उनकी रुचि गणित के प्रति विकसित हो सके। इस रोचक और ज्ञानवर्धक रेडियो धारावाहिक का प्रसारण शीघ्र प्रारम्भ होने जा रहा है।



तुमने  
प्रत्येक रोकार  
समय 9.10 – 9.40 हिन्दी में  
फ्रेक्चरी: 819 KHz पर  
और 9.30–10.00 शाही भाषी में  
फ्रेक्चरी: 666 KHz पर



आकाशवाणी  
संचारिता विभाग के  
उपराजी के लिए लिखी।



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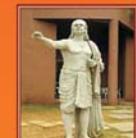
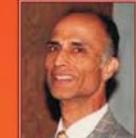
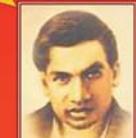


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## Anko Ke Khiladi



26 Episodes Radio Serial "Anko Ke Khiladi" is based on the life and work of selected great mathematician across the world. This radio serial is being produced jointly by Vigyan Prasar, National Council of Science & Technology Communication, New Delhi and All India Radio.



The unique feature of this interactive docu-drama serial is to highlight the valuable contribution of selected mathematicians and to know the importance of mathematics in understanding the secrets of nature, in solving practical problems and how the mathematics has helped to advance the frontiers of human knowledge.



The objective of the serial is to appreciate and understand the importance of mathematics in our daily life and to remove the phobia of mathematics from the minds of children. Some interesting incidents and inspirational anecdotes from the life and work of mathematicians will be the special highlight of the serial. Transmission of this radio serial will start very soon.



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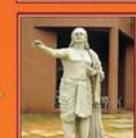
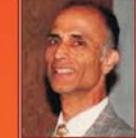
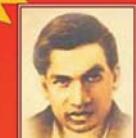


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- 4- Full Address with Postal Pin Code :  
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- .....  
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.....
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- 6- Vipnet Club ID (If any) :  
विपनेट क्लब पंजीकरण संख्या (यदि है तो)
- 7- Profession :  
व्यवसाय
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अथवा

डेस्क :- अंको के खिलाड़ी

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Desk- Anko Ke Khiladi

Vigyan Prasar A- 50, Sector, 62,

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# National Camp for VIPNET Clubs

**13-15, December, Ahmedabad (GUJARAT)**

Vigyan Prasar, New Delhi, in association Gujarat Council on Science & Technology (GUJCOST) organized a three days National Camp for the members of VIPNET Club at Gujarat Science City during 13-15th December 2013. The programme was organized as a culmination of the activities undertaken by VIPNET Clubs throughout the country on theme "Manage to Save Water" as part of International Year of Water Cooperation 2013. The Camp was attended by more than 200 students and 80 teachers representing 24 States and UTs. The main aims of National Camp was to share the experience gained as a result of action oriented activities and to consolidate further the understanding about the water related issues and discuss the concerns with some eminent personalities through face to face interaction.



*Glimpses of Registration & Inaugural Function on December 13, 2013*

## 13th Dec 2013: Day 1

### 9:30 AM:- Registration

The registration was started at 9:30 A.M. VIPNET club coordinators and students (total 240) registered their name and provided with a kit bag.

### 11:00 AM:- Inauguration

The inaugural ceremony started at about 11 a.m. Mr. Narottam Sahoo, Advisor of Gujarat Council on Science & Technology (GUJCOST) gave a welcome remark and briefed about the aims and objectives of the three day camp. Former Director of Vigyan Prasar, Dr. V.B.Kamble, Mr Vora and Mr. B.K.Tyagi, Scientist "E", and Bharat Bhushan Scientist "C", Vigyan Prasar were also present on the dais.

### 12:00 PM:- Presentations By Mr V.B.Kamble: Topic:" From Stream to Sea"

Dr. Kamble gave an idea on the distribution of fresh water on earth by his presentation, starting from streams till it reaches to sea. He told that 2.5% of all water on our planet is fresh water and only 0.5% is accessible as ground water or surface water for our use. He also expressed his view that that Hydro electric power generation plants are not as environment friendly as it is generally perceived. They produce green house gas like methane. The

talk was followed by a question & answer session.

### 1:30 PM:- Mr. B.K.Tyagi

### Story of Campaign: "Manage to Save Water"

Mr. B.K.Tyagi, Scientist "E" Vigyan Prasar, gave a presentation about the work done by different clubs as part of the Campaign" Manage to Save Water. Through PPT presentation, he gave an over view of various types of activities undertaken by the clubs members throughout the year as part of the campaign. He also said that this meet is so special for all children because in science city they have lots of opportunities to experience, explore, experiment with new idea and extend them further.

### 2:00 PM:- Lunch Break

### 3:00 PM: Activity Poster Show by Club Members

This was an interesting session for all participants and delegates. The club members shared their ideas, experiences and work through posters. The clubs members demonstrated and explained their work to other club members.

### 4:00 PM:

Mr B.K.Tyagi and Narottam Sahoo briefed the participants about the planning of two days in details.

### 4:30 PM Tea Break



**Technical Session in Progress**

**5:15PM:- 3D IMAX film Show on "Under Water Sea"**

The participants were assembled at IMAX Theater at 4:45 pm to see the film "Under Water Sea". It was a lifetime experience for all the participants of watching a 3-D film on the largest screen of Asia. The feeling that the snakes are kissing us, the fishes are moving around and over our head and the sharks are coming to eat us was a very thrilling experience, which cannot be explained in words. Thanks to VP and GUJCOST for giving us a *live experience of living inside water*.

**6:15 PM:- Visit Planet Earth Museum:**

At 6:15 we have visited 'Planet Earth' Museum. There were so many galleries with so much of information and activities. Everything on earth was there in the form of a beautiful model, poster or hand-on activity.

**7:30 PM: Experience of Light, Sound and Dancing water Column**

We have an interesting and exciting show of water jets dancing with light and sound on Hindi songs like Bande Mataram, Dola re.....,apni to jaise taise etc. It was a memorable experience for all of us.

**8:30 P.M**

After dinner at science city we are sifted to

Trimurti Mandir guest house for boarding with some announcements. Next day was another day to experience, explore, experiment.

**14th Dec 2013: Day 2**

After the breakfast, participants left for Narmada dam in 5 buses. The journey of about 190 K.M by bus was also a great experience for us. Lots of biodiversity were seen on the way. Many of us spotted some big migratory birds. Unfortunately we could identify only a few.

We reached at Kavedia guest house at 1:30 P.M. and after our there, we left for Narmada Dam (Sardar Sarovar Dam) site. On the way we have seen the proposed site for "Statue of Unity" (Statue of Iron man Sardar Patel). The most exciting part of the visit was seeing the turbines inside a tunnel. As explained by the accompanied guide, there are 6 turbines, each with a capacity to generate 200 mega watt electricity to supply electricity to Maharashtra, Madhya Pradesh and Gujarat in a ratio of 27:57:16. This was followed by visit to power channel, Narmada Dam, 4 Lakes and main canal of Sardar Sarovar Project. After dinner at guest house, we left for Ahmadabad. We enjoyed, experienced, explored a lot throughout the day.

**15th Dec 2013: Day 3, 8:00 A.M**

After breakfast at Trimurti Mandir guest house we left for the science city to be part of an

**Visit To Narmada Dam on December 14, 2013**



## Poster Presentation on December 13, 2013



historical moment "RUN FOR UNITY", the nationwide marathon for campaign of proposed world's tallest statue of "Sardar Patel" near Sardar Sarovar Dam. About 500 people (240 vipnetians and 260 local people) participated in the run wearing special T-shirts with slogan "*RUN FOR UNITY*" and "*ONE INDIA, BEST INDIA*".

### 10: 30A.M- Interaction with International Personalities

This was a special day for us as we interacted with Jamnalal Bajaj awardee and Padam Shree Dr. Anil Joshi, Magsaysay awardee Mr. Rajendra Singh and Dr. R Gopichandran, Director of Vigyan Prasar. Again, thanks to all those involved in this mega event (**Maha Kumbh**) of science club members.

### 11:00 AM:- Presentation by Dr. Anil Joshi

'Mountain Man', Dr. Anil Joshi described his 32 years experience on issues related to water. In his presentation he said that India is comprises of 6 lakhs village but Govt. is only thinking about 600 towns. He also said that the development policies now made are destructive not constructive. He

expressed his view that these policies are neither in favor of environment nor in favour of rural people. The new policies are replacing our traditional and local village works force and wisdom. So this is time to think locally and plan and work accordingly. He was of the view that the youngster we are facing so many difficulties due to the wrongs committed by the old people like him. If water and air are polluted today it is the fault of people belonging to his generation. He requested to pardon them. But advise the younger generation not to repeat the same mistake as the present development model is self-destructive.

### 11:50 A.M

Dr. R Gopichandran, Director, Vigyan Prasar delivered his speech. In his speech he told "How to become a good Expert in a field ? Perception and speed are two more important points to become a good expert. Character is also equally important for becoming a good expert. Science without good character is not useful for the society. Always try to do new things and experiment with new ideas.

## Visit To Pavilion Planet Earth on December 13, 2013



He also told us a story of Japanese and American on this matter.

In the mean time another legendary personality known as "Jalpurus", Magsaysay awarded Mr. Rajendra Singh arrived in the auditorium. Entire hall welcomed him with standing ovation. Mr. N. Sahoo introduced him and then Mr. Rajendra Singh made his presentation entitled "Flow: An Experiences of TBS". In his talk he gave us some ideas on some modern problems and their traditional solution, specially relating to water and its conservation. According to him 2/3rd of the total rivers in India are now dead. Then he shared his experience "how a waterless village become water rich by the effort of villagers with traditional method with community based operations. He was of the view that today the water management programs are a big failure because there is no coordination between scientist and Engineer. He also told that "History can be changed in a moment but Geography takes time". So it is time to save our geography which we are destroying in the name of development. We have to make journey from Realization to Reality. (Ahasas to Ahasas). We have to use Common Sense Science to maintain the geography.

**1:15.PM** Mr.V.B Kamble shared his ideas and expressed his views on the potential of Science club movement in India and what contribution it can make on issues such as preservation and conservation of local environment, natural resources and creating awareness about the same in local communities.

**1:45 PM:- Launch Break, 2:30: PM:- Question answer session** In this session Mr. Rajendra Singh, Dr. Anil Joshi and Mr. V.B Kamble answered the queries raised by the participants.

**3:10:PM:- Presentation by Mr. M.B. Joshi, General Manager, Sardar Sarovar Nigam Ltd.**

Mr. M.B Joshi gave a presentation on topic "Impact of Climate change" In his presentation Mr. M.B. Joshi gave us a clear idea of construction and function of Narmada Dam. He also told that "Climate change is a reality not rhetoric". We got a very clear picture of the spots which were visited by us on the second day of the camp.

**4:00PM: Experience sharing by VIPNET club members and distribution of certificates. 5:00 PM Valedictory Function and closing of the Camp.**



Report by:  
**Santosh Kumar Kar**  
Pathani Samanta Science Club  
Jaya Durga High School,  
At/Po: Narla Road, Kalahandi, Odisha, 766110  
santosh\_kar@rediffmail.com,

**Puzzle- 42 Based On Molecule used in medicine.**

D	E	D	T	D	E	A	A	P	E	D	F	G	R	D
P	A	R	A	C	E	T	A	M	O	L	E	D	F	E
H	E	D	M	E	T	G	H	S	S	E	D	G	F	X
E	R	E	O	D	G	T	Y	E	P	R	T	Y	R	T
N	E	R	X	F	T	E	R	E	R	I	W	H	R	R
I	D	F	I	R	E	R	D	P	P	B	R	I	F	O
R	G	H	C	D	R	T	G	H	R	U	U	I	D	M
A	E	D	I	F	E	M	W	E	E	P	R	T	N	E
M	W	E	L	R	F	O	E	R	W	R	E	R	T	T
I	W	D	L	E	D	R	E	D	F	O	E	F	F	H
N	F	E	I	R	T	P	D	E	R	F	D	E	S	O
E	D	E	N	T	E	H	R	F	G	E	R	T	Y	R
D	P	E	N	I	C	I	L	L	I	N	E	R	T	P
R	F	G	T	Y	F	N	D	S	E	R	F	G	F	H
M	I	L	K	O	F	M	A	G	N	E	S	I	A	A
W	R	E	G	Y	R	T	Y	U	E	R	T	G	R	N

**Clue**

1. A commonly used molecule as pain reliever and fever reducer.
2. One of the most common moderate-spectrum antibiotic molecule, used to treat bacterial infections.
3. Popular name of iso-butyl-propanoic-phenolic acid used to relieving pain, alleviating fever, and reducing inflammation.
4. Oldest drug used to treat pain and fever.
5. The main psychoactive molecule in opium is used to treat acute and chronic (severe) pain.
6. A group of antibiotics molecules derived from Penicillium fungi.
7. Common name of Magnesium hydroxide which is used as an antacid and laxative
8. Main ingredient of cough midicine.
9. A medicine used to treat allergic conditions

**R.K. Yadav**  
drrahiiprs@gmail.com

■ Last date of receiving correct entries: 20 March , 2014.

■ Winners will get activity kit/ books as a prize.

■ **Please send your entries to:-**

**Atom Puzzle-42 , VIPNET News,  
Vigyan Prasar, A-50, Sector 62, Noida-201 309 (U.P.)**

**The puzzle has been Designed as part of  
Campaign on 'Hundred Years of Atom'**

**Answer Water Puzzle- 40**

B	A	S	T	E	T	D	T	H	D	E	G	B	H	S
A	A	E	S	E	E	G	S	H	Y	R	E	[P]		
Y	W	S	S	F	G	T	Y	F	D	S	E	S	D	O
S	E	D	I	F	G	C	R	T	D	F	G	H	F	N
D	F	C	A	N	A	L	R	S	D	E	S	D	G	D
L	F	G	H	J	K	A	F	T	F	R	R	T	G	H
A	D	R	G	H	J	C	K	T	E	Y	U	I	F	G
K	S	F	G	H	J	I	E	V	R	N	E	R	F	G
E	D	R	T	Y	D	E	I	D	O	C	A	N	E	W
S	V	F	Y	R	R	R	A	O	C	E	A	N	S	D
F	V	G	H	T	F	E	G	S	E	D	F	G	J	R
S	E	D	F	H	R	A	W	E	F	W	W	E	C	V
S	D	E	F	S	L	A	E	D	G	H	E	R	S	S
D	E	R	F	G	T	S	D	F	G	E	R	S	D	F
S	D	F	S	E	A	W	D	T	E	R	W	E	D	F

**विजेता/Winner**

**1-M.S. Bhatia (Mumbai)**

# Club speak

## विज्ञान शिक्षण सामग्री की प्रदर्शनी

डा. ए.पी.जे. अब्दुल कलाम विपनेट क्लब, गौरव ग्राम, बासीन, दुर्ग, छत्तीसगढ़ द्वारा 13 नवम्बर, 2013 को विज्ञान शिक्षण सामग्री की प्रदर्शनी का आयोजन किया गया। इसमें चुम्बक दिशा सूचक, तापमापी, कमानीदार तुला, सूक्ष्मदर्शी, पवनवेगमापी, वर्षमापी यंत्रों आदि का दर्शाया गया।



## विज्ञान संबंधी व्याख्यान

रॉबर्ट बॉयल विज्ञान क्लब, बड़ा पोरसा, दत्तिया, मध्यप्रदेश ने वर्ष 2013 में विज्ञान संबंधी विभिन्न गतिविधियों का आयोजन किया। क्लब द्वारा विज्ञान दिवस सहित अनेक वैज्ञानिकों जैसे-रॉबर्ट बॉयल जयंती, विक्रम साराभाई जयंती आदि पर विज्ञान संबंधी विषयों पर व्याख्यानों का आयोजन किया। क्लब सदस्यों द्वारा वृक्षारोपण अभियान भी आयोजित किया गया। क्लब सदस्यों ने जनवरी में स्वामी विवेकानंद जयंती के अवसर पर भी कार्यक्रम आयोजित किए।



## विश्व प्राकृतिक आवास दिवस

रमन साइंस क्लब, चारगांव, प्रहलाद, छिन्दवाड़ा, मध्यप्रदेश द्वारा 7 अक्टूबर को विश्व प्राकृतिक आवास दिवस का आयोजन किया गया। इस दिन विभिन्न वन्य जीवों के आवासों यानी वनों के संरक्षण संबंधी जागरूकता पर कार्यक्रमों का आयोजन किया गया।



## विश्व एड्स दिवस

कल्पना चावला साइंस क्लब, धूपसेड़ी, पंजाब द्वारा 1 दिसम्बर, 2013 को विश्व एड्स दिवस मनाया गया। इस दिन क्लब सदस्यों ने एड्स संबंधी जागरूकता के लिए एक रैली का आयोजन किया।



## प्रश्नोत्तरी प्रतियोगिता

नवलोकायन युवा संगठन, बसुआरा, दरभंगा, बिहार द्वारा विश्व एड्स दिवस के अवसर पर एक प्रश्नोत्तरी प्रतियोगिता का आयोजन किया। इससे पहले संगठन सदस्यों ने पर्यावरणीय मामलों और जल संरक्षण विषय पर एक कार्यशाला का आयोजन किया गया।

## Cycle Rally

Angel Matric Hr. Sec. School, Thiruninravur, Thiruninravur, Tamil Nadu organised "Cycle Rally"

on 10th December, 2013 to create awareness on clean and green streets. Club also celebrated 125th Anniversary of Sir C.V. Raman in association with Federation of Science Clubs of Tamilnadu and Vellore Institute of Technology. Club members visited "Bio mass and Solar power plants" and acquired the knowledge about renewable sources of Energy.



## International Literacy Day

Dhubri Rural Science Society in association with the Dhubri District Adult Education Department observed the International Literacy Day at Kismathasdah HS School with a day long programme on 18 September, 2013. Dhubri Rural Science Society also observed World Peace Day on 21 September, 2013 at Dhubri Girls, Academy High School.



## Workshop on E-waste

Madam Cure Club, New Delhi jointly organized workshop on E-waste with Sir Isaac Newton club on 27th December, 2013. Both club organized many programme together during last one year. Workshop on E-waste organized in association with Nokia. The resource Person sensitized and motivated the students to opt for responsible recycling which means choosing to use official and authorized channels of recycling which are audited and therefore extremely safe for the environment.

## Annual Reports

Boson Science Club, Shavige Malleshwara Hills, Bangalore, conducted many programme like Science Quiz competition, testing of Food Adulteration, Science Exhibition during last one year. Club also organized Traffic Rule rally.

