

A REPORT ON THE 3RD INTERNATIONAL EARTH SCIENCE OLYMPIAD

The 3rd international Earth Science Olympiad was organized by the National Taiwan Normal University at Taipei, Taiwan, during September 14-22, 2009. Fifty students from 14 countries participated in the 3rd IESO. Four other countries were represented by their Mentors/Observers. The Indian Team comprised of the following:

Mr Sarthak Chandra, Pune
Ms Tanvi Chheda, Mumbai
Mr Shobhit Goel, Chandigarh
Mr Sharad Mirani, Ahmedabad
Dr R Shankar and Dr T A Viswanath (Mentors).

All the four students bagged Bronze medals. Besides, three of them also got recognition as part of International Field Investigation Teams that got the BEST FIELD CO-OPERATION TEAM AWARD and the BEST PRESENTATION TEAM AWARD. The concept of International Field Investigation is unique to Earth Sciences. This activity promotes international understanding and co-operation participants at a young age.

The 3-hour theory test and practical test (spread over a day) comprised objective type questions pertaining to geosphere, atmosphere, hydrosphere and astronomy. No question elicited descriptive answers. The question papers were prepared by the Scientific Committee and modified and subsequently approved by the International Jury comprising the Mentors of all the participating countries. Questions were translated for the benefit of non-English speaking

students. The students had the opportunity to use clinometer compass, telescope, etc. during the practical test.

A field trip was organized to the Chelungpu Fault area. This fault got activated and caused an earthquake ten years back. Damaged structures like a power transmission tower, railway tracks, school buildings, race track of the school have all been preserved as a reminder of the devastating power of earthquakes. A museum has been erected to educate common people and school students about earthquakes, its causes etc. with the help of charts, models and films. There is also a theatre where an earthquake can be felt.

International student teams, each comprising six students from different countries, carried out field work in the earthquake-hit region and came up with their findings about the magnitude of the earthquake etc. All the teams presented their findings before a Jury. The BEST INTERNATIONAL FIELD CO-OPERATION TEAM AWARD and the BEST PRESENTATION TEAM AWARD were given to the deserving teams.

At the Rock Knowledge Assembly held at the National Sihu Senior High School, all students, mentors and observers participating in the 3rd IESO contributed a rock specimen each to form the pattern "IESO 2009". This was a unique function to commemorate both the 3rd IESO and the 10th anniversary of the Chichi earthquake.

The visit to the Yehliu Geopark was breathtaking both for the geomorphic features carved by Nature and for the way they have been preserved and presented to common people.

After watching a video film on coastal processes, differential weathering etc, visitors proceed to see what are called queen's head, mushroom rocks, ginger rock, candle rocks and shoe-shaped rock, all with the help of short explanations. A good example of a geopark and how common people and school students can be enlightened about the Earth, its processes and products.

Prof Seiya Uyeda was an Honoured Guest during the Olympiad. He delivered a lecture titled "Breakthrough in Earth Science" in which the young participants were given examples of serendipity, how new ideas should be pursued and how these can not be found in books. Prof Uyeda received a standing ovation for his impressive lecture.

The 4th IESO would be held in Yogyakarta, Indonesia, September 19-28, 2010.

In an effort to send a good team from India to the 3rd IESO, the Geological Society of India organized a Camp in Earth Science at Bengaluru during August 8-22, 2009 for X and XI standard students who were selected for the Orientation-cum-Selection Camps for the Physics, Astronomy and Junior Science Olympiads. Only 10 students responded and six finally turned up for the Camp. One left because of swine-flu scare. Of the remaining five, four were selected based on their performance in tests conducted. They were recognized through Merit Awards (including a cash prize of Rs. 5,000/-) and formed the Indian contingent at the 3rd International Earth Science Olympiad.

During the 2-week Camp, the students were exposed to various aspects of the Geosphere, Hydrosphere, Atmosphere and Astronomy which constitute the syllabus for IESO. The

Camp comprised of lectures, demonstrations, study of hand specimens and thin sections, discussions and interactions with resource persons, in addition to a one-day field trip to KGF for studying structures, field mapping etc, a visit to the Nehru Planetarium for sky theatre demonstration, and telescopic observations.

Resource persons at the Camp were: Drs V N Vasudev (Geomysore Services India Pvt Ltd, Bengalooru), T A Viswanath (Goa University), R K Chadha (NGRI, Hyderabad), P Goswami (CSIR-CMMACS, Bengalooru), R Shankar and K S Jayappa (Mangalore University), Arun Mangalam (Indian Institute of Astrophysics, Bengalooru), H S M Prakash (Geological Survey of India, Shillong), B S Shylaja (Nehru Planetarium, Bengalooru) and Shri Madhava (Amateur Astronomer, Bengalooru).

The Camp was organized with the generous financial assistance from the Ministry of Earth Sciences, Government of India. The Homi Bhabha Centre for Science Education (HBCSE) was helpful and supportive of the ESO activity. Hand specimens of rocks, minerals and fossils were made available for the Camp by the Department of Marine Geology, Mangalore University.


OUTLOOK FOR THE NEXT YEAR'S IESO:

Students for other International Science Olympiads are selected through National-level tests. However, for Earth Science Olympiad, students were selected in 2007 and 2009 from among candidates who had qualified for other Science Olympiad Selection-cum-Training Camps. This procedure offers a limited pool from which to choose the final four students to represent the country at the International

Earth Science Olympiad (IESO). Therefore, it is proposed to conduct a National-level test during January/February 2010 in about 15 centres across India. About 20 candidates would be selected to undergo a 21-day Selection-cum-Training Program in Bengalooru during May 2010 by which time the X and XI standard students would have finished their final exams. Of these, four will be selected based on their performance to participate in the IESO, September 2010 in Indonesia. In this regard, it is proposed to constitute a National Committee for Earth Science Olympiad who can contribute to the conduct of the test and the camp.

The proposed activities would be carried out in co-ordination with other Science Olympiads in the country with the help of HBCSE. Also, suggestions would be taken from HBCSE in this direction.

The Geological Society of India would take up the responsibility of conducting the test, organizing the Camp and sending the Indian team to the 4th IESO. It is proposed to approach the Ministry of Earth Sciences and the Department of Science and Technology for financial support.


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