

HOMI BHABHA CENTRE FOR SCIENCE EDUCATION

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

National Centre of the Government of India for Nuclear Science and Mathematics

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Dr. Rajesh B. Khaparde

HBC/RBK/2009-10/PU - 4

August 31, 2009

Dear Dr/Mr/Mrs,

Greetings from HBCSE-TIFR, Mumbai !

In response to your application, I am happy to invite you to participate in the first workshop for high school teachers on "Procedural Understanding in Physics" to be held at HBCSE, Mumbai during September 10 - 12, 2009 (Thursday-Saturday).

This workshop will begin with exposure and enrichment sessions. There will be teacher development and presentation sessions along with other activities. I am aware that, for all of us, this workshop will be an intricate but an enjoyable learning experience, where a number of resource persons and participants will share / conduct sessions on various aspects of procedural understanding in physics. To prepare our self for this workshop, please find enclosed a set of pre-workshop preparatory material, which I expect you to, read and try to comprehend prior to the workshop.

The venue of the workshop is HOMI BHABHA CENTRE FOR SCIENCE EDUCATION (HBCSE), Tata Institute of Fundamental Research, Near Anushaktinagar Bus Terminus, V. N. Purav Marg, Mankhurd, MUMBAI – 400088. Please find on the back side of this letter, some instructions on how to reach HBCSE.

All the sessions will be held during 10.00 AM – 5.30 PM on all the three days. But on the first day of the workshop, i.e., Thursday September 10, 2009, you should reach HBCSE at 9.30 AM sharp for registration. You will have to pay the registration fees (Rs. 200/-), for which a receipt will be issued by HBCSE. During the workshop HBCSE will be happy to offer a free welcome kit along with all the material required for the workshop and tea/coffee, snacks and lunch during all the three days of the workshop. However, you must bring on the first day of the workshop all the text and practical activity books (CBSE/ICSE/State Board), which you use for teaching physics section of the science syllabus at STD 8th, 9th and 10th. You may keep the books at HBCSE during the workshop and take them back on the last day of the workshop.

In case you had asked for the accommodation, we have arranged your accommodation in the HBCSE Guest House (from September 9 to 13, 2009), which is located inside the HBCSE campus. On reaching HBCSE, please identify yourself and the workshop at the HBCSE main gate for accommodation. You will have to pay extra charges of Rs 60/- per day for your stay in the guest house. Also you will have to pay for your breakfast and dinner directly to the manager, in the HBCSE canteen.

If you need any more information, please feel free to contact me on 9892355422, 022-25482101 (Direct), 25580036, 25567711, Ext.312(Off), 313,314(Lab)

Looking forward to meet you at HBCSE

(Rajesh B. Khaparde)

Convener, Workshop on Procedural Understanding in Physics,
HBCSE, Mumbai

P. T. O

High School Teachers Workshop on “Procedural Understanding in Physics”

September 10 – 12, 2009

Workshop Objectives:

The prime objective of this workshop is to introduce and illustrate what do we understand by procedural understanding and put forward a need for the development of procedural understanding among students. The other objectives of this workshop include, identification of a group of interested teachers, analysis of NCERT/ICSE/MSB Text books (STD 8 - 10) with respect to development of PU, study the suitability of various approaches and to develop a few activities for the development of the PU in students during the high school education.

How to Reach HBCSE:

Homi Bhabha Centre for Science Education (HBCSE) is located in the North-East of Mumbai near **Anushaktinagar Bus Terminus / Depot**. Anushaktinagar Bus Terminus is a landmark known to most taxi/auto drivers. The Centre is immediately adjacent to the terminus on the Eastern side.



The following guidelines will help you to reach the Centre either by road or by suburban (local) train.

- If you are at **Churchgate**, you may come to CST/VT by a taxi and follow the guidelines below.
- If you are at **CST/VT**, buy a ticket to Mankhurd and board any train (on the harbour line) marked M, VA, BR, or PL. The journey time is approximately 40 minutes. After alighting at Mankhurd get out of the station on the east side and take an auto-rikshaw to Anushaktinagar Bus Terminus. Soon after the first right turn you will see HBCSE to your left.
- If you are at **Dadar**, you may take a (BEST) city bus to Anushaktinagar Bus Terminus. It is not advisable to take the suburban train in the evening after 3pm, specially on a working day. If you wish to come by the suburban train, buy a ticket to Mankhurd, take a train for Kurla station, and then switch over to harbour line train on platform number 7 to reach Mankhurd. After alighting at Mankhurd get out of the station on the east side and take an auto-rikshaw to Anushaktinagar Bus Terminus. Soon after the first right turn you will see HBCSE to your left.
- If you are at **Kurla**, you may take an auto-rikshaw to Anushaktinagar Bus Terminus. Auto fare will be about Rs. 40/-. If you wish to come by the local train buy a ticket to Mankhurd and board harbour line train on platform number 7. After alighting at the Mankhurd station, get out of the station on the east side and take an auto-rikshaw for Anushaktinagar Bus Terminus. Soon after the first right turn, before reaching the bus terminus, you will see HBCSE to your left.
- If you are at **Churchgate or Mumbai Central** station, you may take a suburban train (on western railway local line) to Dadar or Bandra, and then take an auto-rikshaw to Anushaktinagar Bus Terminus. Auto fare from Bandra will be about Rs. 80/-. From Bandra you can also board BEST bus, route number 371 directly to the Anushaktinagar bus terminus.

If you have any problems in reaching HBCSE please call HBCSE reception, asking for help.
Phones: +91 - 022 - 2556 7711, 2555 4712, 2555 5242, 2558 0036, 2558 0890.