



WORKSHOP FEEDBACK FORM

Workshop Title	:	Capacity Building Programme
Workshop Date	:	20.5.19- 23.5.19
Venue	:	BBPS PITAM PURA
Attended by	:	Ms Trilochan Khurana, Mr Umesh Verma
Resource Person	:	Shri Suraj Prakash, Ms. Neeta Rastogi, Mr. Harsh Kumar, Ms. Pragya Nopani, Ms. Asha Prabhakar, Mr. Anand Sharma, Ms Geeta Gangwani And Mr. Hari Om
Organizer	:	BBPS TRAINING CENTRE

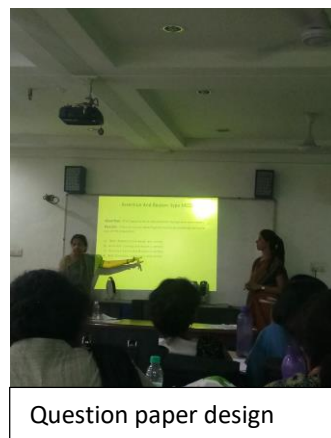
1. Content of the Workshop/Seminar

A four-day Workshop was organized by BBPS Training center at Pitampura for the Science teachers of Bal Bharati Public Schools. It was attended by approximately 45 Science TGTs from different backgrounds of Physics, Chemistry and Biology. The workshop was divided into three sessions each day.

DAY- 1 (20.05.19)

Resource Person – Ms Neeta Rastogi

- The session started with a warm welcome by Mr.Suraj Prakash. He emphasized on the importance of training for the teachers and the need of workshops to upgrade oneself continuously and introduced the resource person – Ms Neeta Rastogi.
- The question paper design /format for classes IX and X for session 2019- 20 was discussed. The question paper will include ‘typology’ of questions pertaining to remembering, understanding, applying, analyzing &evaluating and creating. Distribution of percentage of marks of each component needs to be followed.
- The internal assessment, periodic assessment, subject enrichment and portfolio (achievements) form important components of the complete assessment.
- Objective section will include 10 MCQ’s besides ten other ‘very short answer’ type questions. Assertion – reasoning type MCQ must be included.
- Care should be taken to frame the questions skillfully to achieve the desired learning outcomes.
- The rules for framing the MCQ’s were discussed:
 - (i) Keep the alternatives homogenous.
 - (ii) Use complete sentence for the question and not an incomplete statement.
 - (iii) Put the blank at the end instead of at the beginning.
 - (iv) All alternatives should be plausible and logical.
 - (v) Balance the placement of correct answers.
 - (vi) Avoid the use of determiners – never, always, only.
 - (vii) ‘All of the above’ and ‘None of the above’ should not be used.

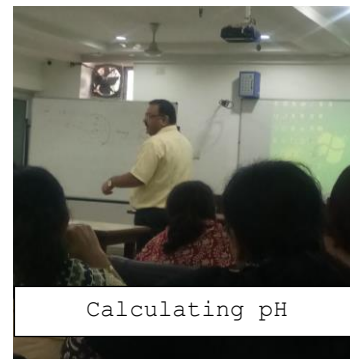


Question paper design

DAY- 2 (21.05.19)

Resource Person – Mr Harsh Kumar – Principal, BBPS Manesar.

- Various theories that explained the 'structure of matter' were discussed and their limitations were pointed out.
- How are protons with similar charges able to stay inside the nucleus? This was explained by taking into account the phenomenon that protons and neutrons are inter- convertible and the role of 'meson' particles.
- How are atoms stable? This was attributed to the n/p ratio.
- The meaning of 'pH of a substance' was discussed. It does not have a unit because it is actually a ratio of two concentrations. It depends upon the number of H^+ ions that are produced.
- The effect of temperature on pH was also explained.
- The fourth state of matter –'plasma' is produced when very strong heat is applied to gaseous state of matter. Free electrons move to the periphery and hence plasma conducts electricity.
- Cooling a solid to very low temperatures make the atoms come close together as one unit, losing their identity, resulting in Bose Einstein Condensate.
- Latent heat of a substance was also explained in a simple way.
- Dr Anand Sharma, Director Met Department in Dehradun touched upon various aspects of weather and its forecast. He informed us about the importance of weather prediction, agro advisories, early warnings of extreme weather, disaster management and environmental awareness.
- Ms Asha Prabhakar, Principal Bal Bharati Public School, Noida went on to explain the shift from STEM to STEAM in the field of education which has brought into focus the importance of studying of arts. With a STEAM education, students can explore a broader range of interests; some may naturally excel in Science and Technology, and others may enjoy exploring their artistic side. Flexibility to incorporate arts into their curriculum will result in a 'well rounded education'.



Calculating pH

DAY- 3(22.05.1)

Resource Person – Ms Pragya Nopani of BVN, Delhi, Ms. Geeta Gangwani-Principal, BBPS Rohini.

- The session was conducted by Ms. Pragya Nopani with a magical statement of only two alphabets '**If it is to be it is up to me**'.
- Simple activities were demonstrated to help focus on creative science integration strategies and the need to make science more fun and meaningful in the classrooms.
- Activity: A dough with wheat flour, common salt and water was prepared, which was moulded into wire- like shapes of different lengths and thickness. LEDs and cells were used to make simple circuits with the dough wires to study the dependence of resistance on length and area of cross section of conductors by observing the intensity of the glowing LEDs.
- Nurturing Creativity through STEAM activities.
- Use of 'story telling' which deals with a problem and invites varied alternatives as solutions.
- She prepared a highly viscose liquid which she called non Newtonian liquid when pressure is applied on the liquid it behaves like solid. She conducted many small activities like paper star, auto rotation of wooden plank and water surface tension using glass tumbler, plastic sheet, coins and water.
- Ms. Geeta Gangwani conducted a workshop on Flip learning



Activity on Wooden plank

DAY- 4(23.05.19)

Resource person- Ms. Pragya Nopani and Mr. Hari Om

- Another activity performed by Ms. Pragya Nopani was based on magnet in which she hung three coins one over another in air.
- In next Session which was named as 'Short Experimental Challenges' subject wise materials were given to the group of teachers to prepare an activity based on any topic which can be visualized by students with ease.
- We were given two types of paper circles, one white and other colored which represented two types of bugs, and considering ourselves as predator we picked buds randomly and obtained different observation in limited time. The law of Natural selection was explained nicely.
- In another session she put more in which he demonstrated several activities on various concepts of physics and chemistry.
- He also conducted an interactive session with teachers about failure of several activities with regard to molar concentration.
- He showed us the making and working of hydrogen and oxygen fuel cell.



Hanging Coins with magnets

1. Learning outcomes (Knowledge and Information) from the workshop/Seminar?

- STEM to STEAM will help produce a range of interests in students.
- Performing complex experiments in easier way through micro scale kit.
- Use of Multimeter must be encouraged in students.
- Environmental awareness in students is of great importance.

2. Which topics or aspects of the workshop/Seminar did you find most interesting or useful and can be applied to the classroom teaching?

- Electrolysis in micro scale kit and use of W tube for reaction like redox.
- Hands on experimentation of electrolysis, Dilution of acid and bases, finding pH.
- STEM to STEAM is an interesting concept in the field of education.
- The concepts of the fourth state of matter – 'plasma' and the 'Bose Einstein Condensate' were interesting.

3. How will you implement the knowledge & techniques acquired to your subject?

- Flexibility to incorporate arts into the learning process will be useful.
- Promote Hands On and Activity Based Learning
- Involve students, teachers and other school staff in developing a vision, goals and objectives for good overall development of Students.

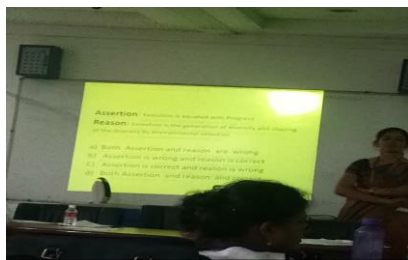
4. Comments and suggestions (How do you think the workshop/Seminar could have been made more effective?)

It was a very well designed, comprehensive and an informative set of workshops. An enriching experience!

5. Was the advance briefing about the workshop/Seminar appropriate? YES

GENERAL FEEDBACK	YES	NO	NOT SURE
<ul style="list-style-type: none"> The workshop/Seminar was applicable to my job 	•	○	○
<ul style="list-style-type: none"> I will recommend this workshop/Seminar for other faculty members. 	•	○	○
<ul style="list-style-type: none"> The program was well paced within the allotted time 	•	○	○
<ul style="list-style-type: none"> The material was presented in an organized manner 	•	○	○
<ul style="list-style-type: none"> The resource person was a good communicator 	•	○	○
<ul style="list-style-type: none"> The resource person was knowledgeable on the topic 	•	○	○
<ul style="list-style-type: none"> I would be interested in attending a follow-up, more advanced workshop / Seminar on this same subject 	•	○	○
<ul style="list-style-type: none"> I will be able to conduct follow up workshop for the benefit of fellow Staff Members 	•	○	○

GLIMPSES FROM THE WORKSHOP (Photographs with captions)



Discussing innovative strategies



Discussion about failure in experiments by Mr HariOm

Report submitted by

Signature

Name –

1. Mr. Umesh Verma
2. Ms. T. Khurana

Submission Date –