

Science-Enthusiast, Teacher Narendra Sharma

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Mothapur is a village located about 25 kilometres from the Khargon District Headquarter. The village has a Secondary School with an enrolment of 39 students. There are two regular teachers and one guest teacher. The population is around 700, most of it being Patidars, but most of the students coming to the school are from the Scheduled Castes.

Narendra Karma is a Science Teacher posted in this school since 2009. We had met him for the first time in a Science Kit Workshop. Thereafter, we have been in touch telephonically. Whatever activity or science experiment he conducts, is shared with us on whatsapp by way of photographs or information. We decided to go to his school. When we contacted him on phone, we were told that there had been a death in the village and so there were no children in the school that day. He himself was, however, present in the school and said that we were most welcome to come and talk to him.

As our conversation began, he showed us his small science wonder-box and started sharing his experiences with us.



“Science is not a subject to be taught just through books”, he said. “If we provide opportunities to children to learn while doing, they are able to learn easily and do not have to take the path of rote-learning.

“I show experiments in the class and also give them the opportunity to experiment on their own. One day it crossed my mind as to why we should not try to make lampblack ('kaajal') and I started teaching them the method of making it. We burnt an oil wick and made lampblack from it in the class. The children were greatly surprised at this way of making lampblack. They enjoyed it a lot. Had I not taken them through the process involved and just asked them to memorise it from a book, they would have had to work harder and would also have forgotten it all within a few days. But now they can make lampblack as well as relate the method used for this purpose.



Similarly, I was one day teaching the class about seed-germination and they were finding it difficult to understand the difference between the root seed and the stem seed in Hindi *moolankur* and *praankur*. I got them to bring seeds of gram ('chanaa') and green pulse ('moong') and we kept them dipped in water. After two-three days we saw them sprouting in the form of root seed and stem seed, PRAANKUR and MOOLAANKUR and I described to them which part was which. I work with children in school, of course, but take some of the material for experiments home too. I also get children living in my neighbourhood to experiment and this helps in my own preparation too.

The microscope in the school was not in a fit condition for use. In the Science Kit Workshop we had been told about working on the cell but with no microscope ready for use, I started thinking of how to resolve this issue. I got to know that there is a microscope in the Likhi school and so I brought it from there and showed the children an onion-membrane and they found this really interesting."

There was a rack fixed at a height on a wall in the school. It had small containers with chemicals in them. We asked Narendra about this and he said that when children all the time get to see these chemicals placed thus, they keep reminding him about them. The rack was fixed at a height so that the children do not come in contact with a chemical that could be harmful for them.

Every now and then he gives the children card-sheets to make science-pictures on them. They work on these in groups and the card-sheets are then pasted or tied to the walls, for the children to look at them throughout the year and feel proud of the work they have done.



Narendra Karma says that he does not wish to limit himself to this school and so when he was requested to come to the Lonar Jan Shiksha Kendra for a training-workshop, there too he shared his experiments with teachers. The teachers did some experiments themselves also. He feels that such workshops should be organized on a continuous basis so that teachers can themselves experiment and consequently not face any problems in getting children to do similar experiments.

Narendra likes to be involved in academic work. He would like to have a bag all the time with him that contains all the material required for his experiments. He wishes to move from one school to another, all the time doing experiments of science with children and teachers.

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Translated from [Hindi](#) by Ramnik Mohan.

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