Outdoor science experiment classes;  
Raising the next generation  
for researchers and teachers of natural sciences  

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The outdoor science experiment classes have objectives; for young students and pupils as trainees to develop large-scale natural science experiments and to demonstrate them for the visitors in the venue of EXPO park at Osaka. Expected for the trainees are expanding their scientific ideas and thoughts unlimitedly and acquiring of physical and spiritual strength and toughness at the same time, through overcoming problems in carrying out and interpreting the experiments.

The project evolved from the science festival for youngsters in Osaka \cite{1} in 2009, to raise the motivated next generation as able science researchers and teachers, in the same spirits as the programme “Visit to the basics of natural science”\cite{2}. It is stressed that the trainees experience very often for the first time such problem solving through consultations and discussions with their group leaders, as aimed at in this project. Every year one Sunday in May is selected to open the opportunities to visitors. Typical numbers of teachers as project managers; 30, of trainees, mainly high-school pupils; 50, and of visitors; approximately 3,000. The acceptance from the side of visitors is quite satisfactory every year; through opinions that the participation develops discussion on science and related topics among family members, friends and classmates, even with trainees, and from the trainee side; through their confidence of own growth.

This project also aims in a long time scale at opening a science park where visitors are absorbed in tackling with experiments and in developing their thinking all day long. This method, hardly realisable in the frame of school education, is to be proposed as successful new active learning for motivated next generation who wishes to enter the field of natural science as researchers and/or teachers.

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\cite{1} N. Takahashi and N. Suzuki, Contribution to this Conference  