

**Science Lab for Outreach: Tools for inspiring and communicating science.**

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One of the current obstacles in Thai education is students' lack of opportunity to self-discover through empirical research. Especially in subjects such as science, one required experimentation, research, evidence exploration and logical thinking. Therefore, today's learning is becoming more obliged to be active. The National Science Museum, Thailand (NSM) is well informed and accordingly developing activities to continuously support learner-centered and experience-based learning for science related subjects.

"Science Lab" is an activity designed for children, youth and those with interest in science to conduct scientific experiment. By personal experience and practice of scientific tools in an entertaining and inspiring manner, the activity had provided positive perception and motivated awareness on science for visitors. On top of that, the activities became available at remote parts of Thailand by one of NSM's outreach programs; NSM Science Caravan. This promotes youth's access to active learning. From November 2017 to February 2019, 4 Science Lab activities were carried out in total of 1,144 times with overall sum of 48,886 participants. The activities had traveled with NSM Science Caravan across 30 provinces of Thailand.

Other than acquiring knowledge, after the activities participants acknowledged the experience gained differ from classroom and had improved view on learning science. From the study, majority of teachers and students are satisfied with Science Lab and would like to have similar activities at their schools. The pre- and post-test showed revised understanding of science relating to the activity.