

## Volcanology class in Dinosaur Valley Fukui Katsuyama Geopark: Molten lava flow experiments in elementary schools

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We report the results and educational effectiveness of our volcanology classes in the elementary schools in Katsuyama, Fukui. The volcanology class is a part of the outreach activity in Dinosaur Valley Fukui Katsuyama Geopark, and is designed for the purpose of disseminating knowledge of volcanoes and volcanic products in Katsuyama region. Although there is no active volcano in Fukui prefecture, several Quaternary volcanoes (1 to 0.7 Ma) are existed in Katsuyama region. These volcanic products formed a large part of the basement in this region. The largest ski site in Fukui (SKIJAM Katsuyama) harnesses the slope of lava flow morphology of the youngest volcano (Hoonjisan) in this region. These facts indicate that people in Katsuyama region lives on the benefits of volcanoes, however, the relationship between volcanoes and the land formation in Katsuyama region is not well understood by local residents. Thus we aim to give elementary school students a deeper understanding of volcano and the land formation in Katsuyama region through our volcanology class. In the class, we demonstrated an experiment of lava formation by using portable clay cooking stove (Shitaoka et al., 2011). The students observed lava forming process, and measured the temperature of the produced fluid lava by using an infrared radiation thermometer during the experiment. In addition, the students observed flowing lava on the slope of sandpile, and studied the formation of lava flow morphology. The results of questionnaires after the volcanology class indicate that the students understood the formation of lava flow morphology and the basement volcanic products of SKIJAM Katsuyama, and also show the improvement of their interest to the relationship between volcanoes and the land formation in Katsuyama region.

Keywords: volcanology class, molten lava flow, elementary school, geopark, Katsuyama, Fukui, Japan