

19th Children' s Summer School on Earthquake and Volcanoes in Izu-Oshima Geopark

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Children' s Summer School on Earthquakes and Volcanoes (<http://www.kodomoss.jp/>) is the event: elementary, high school students learn and consider about the occurrence factors of earthquakes and volcanic eruptions, and the blessings of nature. This event has been managed by Seismological Society of Japan, Volcanological Society of Japan, and Geological Society of Japan in every summer vacation since 1999 (Hiiro et al., 2018).

In 2019, we accepted 34 children from local elementary schools to high schools at Izu Oshima. At the beginning it was scheduled 2 days but held only one day on August 7 due to the typhoon. The location of Izu Island is in Izu-Ogasawara island arc. The island is the volcanic island which occurred of magmas due to the subduction of Pacific plate. The recent volcanic activities are cited Mt. Miharayama eruption in 1986.

This time, with the theme of "Secret of volcanic island of Izu Oshima", about the history from the birth of the island to the present and the relationship with the community established there, experiments using outdoor observation and familiar materials, dialogue with researchers. Through children, children understood the mechanism of volcanic eruption, deepened their understanding of nature's blessings, sightseeing, and natural disasters, and aimed to think about the island's past, present and future. Children deepen their understanding of the origins of the island from learning through fieldwork, indoor experiments and lectures. Children observed island' s topography, and learned lava rocks in the west side of Izu Oshima, the Motomachi area, and the structure of the inside of the caldera. Regarding geology, they observed the volcanic ash at the outcrop near the Oshima Onsen Hotel. They learned that gray white volcanic ash derived from Kozu Island was sandwiched and erupted on another island in a short period. They observed the lava, and learned the difference of the production of pahoehoe lava and aa lava. In the room, they carried out Caldera experiment, Magmatism experiment reproducing the nature and upward process of magma, lava experiment reproducing the movement and formation of Pahu Hui lava, and eruption experiment reproducing eruption style using Carbonation.

At the end of the day, children summarized what they learned and made presentations. After the summer school, we discussed the next summer school, based on staff' s opinions, the questionnaire responses from children, and children' s presentations. Based on the opinions of staffs, we conclude the summer school finished successfully because of the many experiences and best behavior of local. According to the questionnaire responses, with 3 out of 4 experiences, 80% of children gave good evaluation. We consider this rate showed children had a high interest in experiments. And, 22 people (65%) gave good evaluation in the observation of topography and strata. We consider this rate showed children had a high interest in topographical geological phenomena. Based on the Children' s presentation, we conclude that active volcanoes are always active and there are inconveniences in children' s living, but many benefits such as hot springs and good fishing grounds are received.

The program held over 2days each year was held shortened to 1day, but children solved the cause of the volcanic phenomena through observation, experiments and lectures, and the natural blessings obtained by living on the volcanic island , How to live in harmony with natural disasters, thinking about the past, the present, and the future of Izu Oshima, it seems that it became meaningful summer school.

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