

## 18th Children' s Summer School on Earthquakes and Volcanoes in Mashiki-machi, Kamimashiki District, Kumamoto Prefecture

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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.

In August 9-10, 2017, the 18th Children' s Summer School on Earthquakes and Volcanoes in Mashiki town, Kamimashiki District, Kumamoto Prefecture (the middle of Kyushu island). The location of Mashiki town is in the middle of Kumamoto Prefecture. The city experienced the maximum intensity of 7 during the Kumamoto earthquake in 2016. In this time, children leaned and consider about the occurrence of earthquakes and volcanic eruptions, the blessings of nature, and the restoration in Mashiki town.

Through the fieldwork, the experiments and some lectures, children learned about volcano, fault, and spring-water. Regarding volcanoes, they observed Aso-3 pyroclastic flow deposit, and carried out the experiment about occurrence of pyroclastic flow, and learned the mechanism of movement and sedimentation of pyroclastic flow. Regarding faults, they observed the surface fault in Mashiki town, carried out the experiment related with strata, and then learned the relationship between the fault formation and stress field. Regarding spring water, they observed the recharge water at "Akai-somendaki", carried out the experiment about mechanism of the spring water, and then learned the relationship between the formation process of aquifer and geological structure. Finally, they summarized this event and made a presentation. At the same time, a briefing session for residents was held in order to introduce the activities of Children' s Summer School on Earthquakes and Volcanoes. Also, this session explained about the natural disasters caused by the Kumamoto Earthquake and eruption of Mt. Aso.

After this summer school, we discussed the next summer school, based on stuff' s opinions, the questionnaire responses from children, and children' s presentations. Based on the opinions of stuffs, we conclude the summer school finished successfully because the participation of local took care of children' s health and paid attention to road safety for children. According to the questionnaire responses, 23, out of 28 children gave good evaluation for the spring water experiment, 21 children for the pyroclastic flow experiment, 19 children for the strata experiment, and 16 children for the observation of "Akai-somendaki". In this questionnaire, we asked children "What are we able to do for restoration of Mashiki town?". Some children think that understanding and discussing safety area and dangerous area. Also, children presented the reconstruction plan for the town. In this plan, they develop products using spring water, and construct an earthquake museum. Overall, we can attain our purpose: children recognize the occurrence factor of earthquakes and volcanic eruptions, discuss the reconstruction of Mashiki town after the Kumamoto Earthquake, and consider about the coexistence with nature in Mashiki town.

Keywords: Children' s Summer School on Earthquakes and Volcanoes, Kumamoto Earthquake, Mt. Aso, Mashiki town, Outdoor education