

Mt.Apoi Geopark's Efforts in Elementary School Science Education

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<Introduction>

Elementary school 6th grade students learn about volcanoes in science class unit "The Earth's Structure and its Changes." But in Samani, there are no volcanoes. In Japan, there are a lot of areas with no volcanoes. We considered how to guide children's understanding of volcanoes in non volcanic areas.

According to a questionnaire answered by teachers, 80% of elementary school teachers feel "Geology" is difficult to obtain documents and information for when the teachers teach about regional geological characteristics. More than 50% of elementary school teachers feel that the units "Weather" and "The Earth's Structure and its Changes" are difficult to teach. Many elementary school children can imagine fossils and volcanoes, but they feel it is difficult to consider the Earth's underground structure and its changes.

Here, we introduce the elementary school science education efforts put into place in Samani's neighboring town Urakawa's elementary school. We aim to foster student's understanding of the scale of volcanic eruptions and natural forces.

<Content>

Urakawa Elementary School 6th grade students spend 11 hours on unit "The Earth's Structure and its Changes" during the school year.

Students learn about geological faults, fossils, volcanoes, earthquakes, geological folds, sedimentary rocks, igneous rocks, and the Earth's underground structure and its changes. Mt. Apoi Geopark supports units "Volcanoes" and "The Earth's Structure and its Changes".

Learning about Volcanoes. We lead lectures on volcanic activity in Hokkaido. The lectures feature Usu Volcano's eruption since it is one of the nearest volcano.

Learning about the Earth's Underground Structure and its Changes. Students went to 2 rocky outcrops in Samani to see in person layers and the different rocks that compromise the layers. Because there is no volcano in Urakawa, students were shown an outcrop made by volcanic ash. Urakawa's outcrops could not be used, but by using a geological map, students could see that Urakawa's outcrops were connected to the ones they saw in Samani.

<Conclusion>

Students often find it difficult to learn about the Earth's underground structures and its changes, but if they participate in on-site, outdoor learning by visiting local, visible, and tangible outcrops, students can gain a deeper understanding. However, teachers often find it difficult to execute outdoor education because this method of teaching takes a lot of time to prepare. Teachers would like geoparks to offer local geological information, geological materials, and information on outcrop locations for outdoor, on-site education.

Geoparks would like to work with schools to educate children on geological information.

<Literature>

Research for enhancing science education in Hokkaido. -5th Survey on Science Education in Hokkaido- Study report (2012) Science Education Center attached to Hokkaido Education Research Institute, Hokkaido University of Education.

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