

How magma can reach Earth's surface: A lecture plan for higher grade elementary school children

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Two readers for elementary and junior-high school children on co-existence with an active volcano Usu has published by Hokkaido Development Bureau. One of the readers, 'Hi-no Yama-no Hibiki' (Tone from an active volcano) is an higher grade level of elementary school children. It consists of 32 cards with appendix cards. According to opinions from some teachers, one of the cards, titled 'From where magma derive?' is rather difficult to teach by themselves. I have created several simple experiments using foods and household materials to simulate magma ascent and eruption mechanisms. I have taught 6 classes at three schools during October-December last year.

The lecture consists of explanation of the card and supplementary videos. Real images of eruptions were copied from existing educational videos. Video footages of the experiments I have recorded, include magma ascent, eruption, variation of magma viscosity and phreatic explosion. The experiment is simple and easy to reproduce again by children.

I am planning to show these video clips during the poster session.