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Elementary Education using Satellite Images on Specific Units and Environmental Learning

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We report on our activity of utilizing satellite images on specific units and environmental learning at elementary and junior-high school. The advantages of satellite images from earth observation satellites, wide and frequent observation, enable students to understand the large-scale phenomena of the earth. For the units "effect of flowing water" in fifth-grade and "land-forming and its change" in sixth-grade of science class, we used before-and-after images of some rivers struck by heavy rain and volcano eruption. We also used three-dimensional images acquired by the satellite which can acquire stereoscopic images. Using these images, the students could imagine and discuss the land-forming process by water flow and volcanic activity. For the environmental learning in elementary and junior-high school, comparison studies of recent and historical images were effective. We showed the students some examples of drastic land-cover changes, e.g. melting glacier ice, spreading desert, and deforestation. The images we showed to the students, the examples of curricula and the other educational materials we used are shown in this presentation. We also discuss issues and future possibilities of our activity.

Keywords: remote sensing, earth observation, science education, environmental education, disaster prevention