

YUREO: an analog experiment equipment for earthquake induced landslide

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YUREO, an analog experiment equipment for earthquake induced landslide, is developed for science study in elementary school seismic change in the land (the sixth grade class).

We have done several Demae lecture (delivery lecture) for ca. 200 children in eight classes.

Examples of the actual progress of the class (for example, Noshiro Mukai elementary school) is as follows: Self-introduction of the lecturer (0-2 minute), introduction of the lecture (2-5 minute), What should I do at the time of earthquake? (5-12 minute), lecture on Land change by the earthquake with photo of Iwate Miyagi Inland Earthquake in 2008(12-24 minute), YUREO experiments (24-36 minute), Emergency Earthquake Games (30 seconds), fill the questionnair sheet (36-44 minute), questions about volcanoes and earthquakes from the children (44-55 minute).

Materials for making YUREO are as follows: two plywood sheets; 9 springs; cardboard plastic (900 x 600mm); adhesive; soil of flower pots (3.0L); soybean flour blue; weight (2 kg); calendar paper (not smooth one). All materials are sold in 100 yen shop or home center. In addition, springs are set between two sheets of plywood and are fixed with adhesives.

The experimental procedure is as follows: 3L of earth for the flower pot is set on YUREO equipment to make a small mountain; you plug in a paper in the mountain as an analog of the sliding surface. Finally, toasted soybean flour (that clearly show the microstructure of landslide) was sprinkled on to the small earth mountain on YUREO.

Questionnair survey was conducted for 169 children in six classes. Question 1. 'Have you ever heard of the word landslide?' ; Question 2. 'What did you learn from this experiment?' ; Question 3 asks the impressions of YUREO and landslide.; Question 4. 'Please write your feedback for this landslide experiment'.

Analysis of questionnaires indicate that YUREO is fun and impressive for children, and is an effective educational material for teaching earthquake induced landslide.