

4.9 Nurturing Students' Scientific Inquiry by Bringing Data from Mt. Fuji's Summit into the Classroom

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1. Introduction

Nature is an invaluable educational resource. For example, we can find many wonders at the summit of Mt. Fuji, the highest point in Japan. By utilizing this outdoor environment and data from the summit, students' inquisitive minds and scientific curiosity can be stimulated.

Promoting contemplation of science will enhance students' knowledge and sense of wonder. We suggest here some experiments to be performed in collaboration between students and teachers.

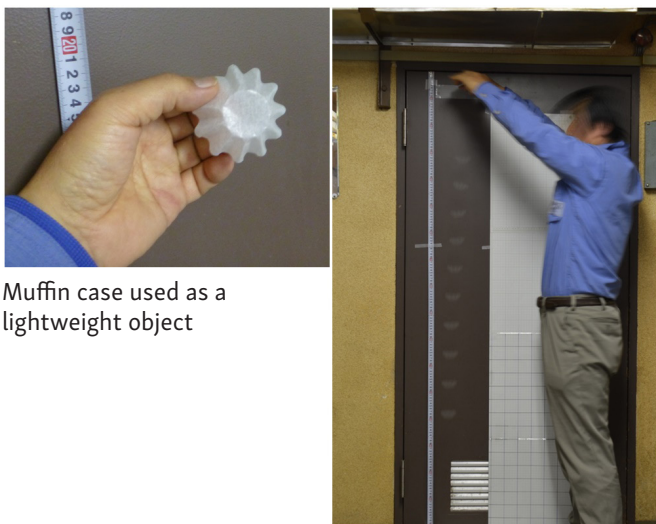
2. Suggested activities

(1) Investigation of lightweight objects floating on the wind of a hair dryer



Experiment using a ping-pong ball in the MFRS building

(2) Tracking of lightweight falling objects by multi-exposure photography



Muffin case used as a lightweight object

Measurement in the MFRS building

(3) Observation of air streams by tracking the motion of a helium balloon



Experiment using helium balloons near MFRS and at the edge of the crater

(4) Air sampling to build understanding of Boyle's law and Charles' law



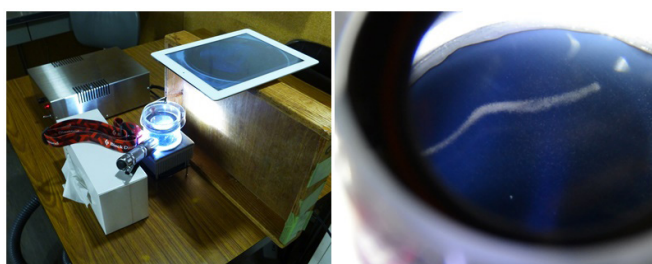
PET bottles closed at MFRS and brought down to measure the volume

(5) Measurement of transportable weight by remote-controlled helicopter



Experiment using a small toy helicopter in the MFRS building

(6) Observation of radiation tracks in a cloud chamber



The observation system used in the MFRS building