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## Change in Elementary Students' Interest in Science through the May 21, 2012 Eclipse

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Abstract: Elementary school students who do not like science have increased, and it has become a serious problem. This investigation has been carried out regarding the interest in science of elementary school students. Through the observations of the annular solar eclipse on May 21, 2012, a change was confirmed in the students' interest in science.

### 1. Introduction

Science education in elementary school is very important to understand the stages in human life and natural phenomenon in those stages. However, many people think “Science is difficult for me,” especially elementary students and junior high school students recently. This report is about what separates students who like science and other students and the changing interest in science during elementary school. There was a solar eclipse this year. This report used that natural phenomenon to research students' interest in science.

### 2. Methods

The data on elementary school students' thoughts about science was collected by survey. In this research, a survey was sent to the 4th Mitaka Elementary School. There are 473 students in this school. The survey was taken by 322 students who had received science education.

### 3. Questionnaires

First of all, the data about the students' interest in science was collected. For analysis of the questionnaire, male and female students were divided according to grade level as shows in Figure 1.

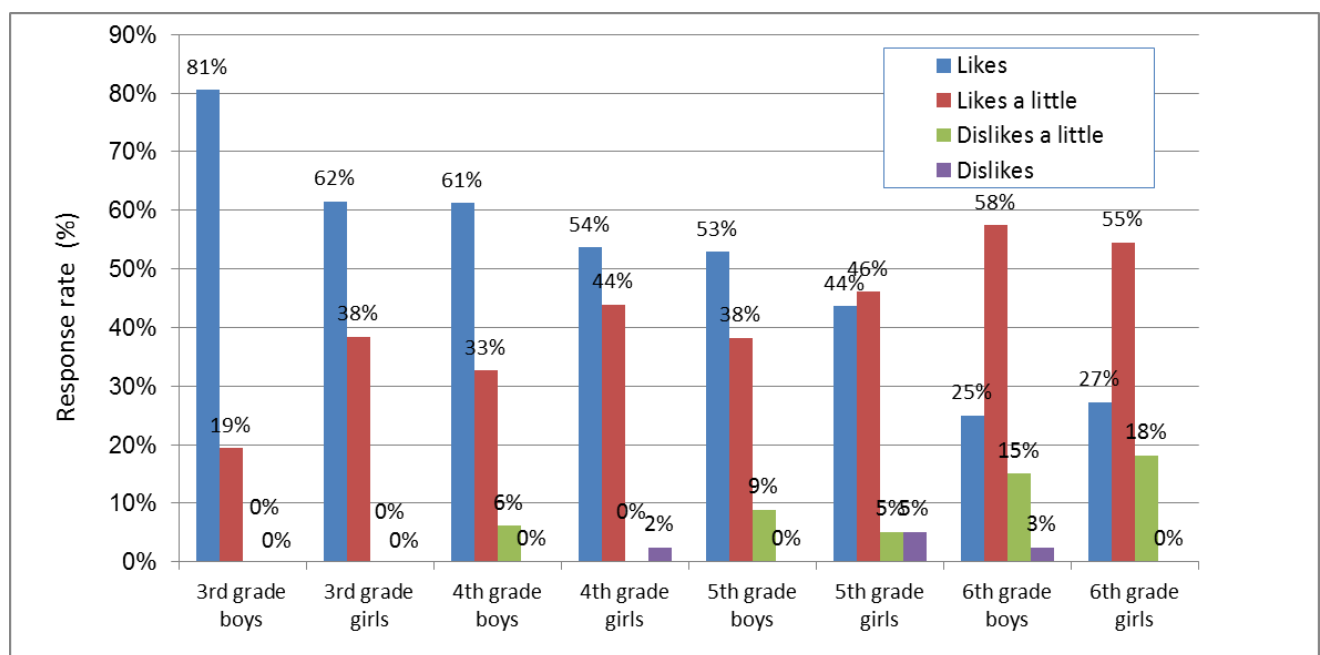


Figure 1. Interest in science

In Figure 1, there is a tendency that the dislike rate of science becomes higher with higher grade level. Course contents become difficult to understand in the upper grade classes which may be the cause of the increase in the dislike rate. Of the third grade boys, 80% answered "likes," but the majority of 6th grade boys answered "likes a little."

### 3. Interest in the fields of science

Figure 2 shows the results regarding interest in various fields. The students' interests for science fields are mostly different between boys and girls. Electricity is the most popular with boys, and plants and flowers are the most popular with girls. However, astronomy has a high rate with boys and girls. Because the subject of this report is about the changes in the interests of science, in this study, the small gender difference in interest in astronomy is good to find any changes of interest.

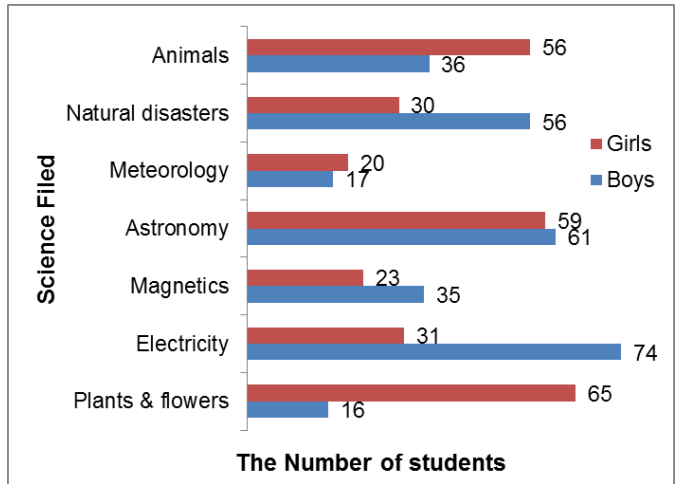
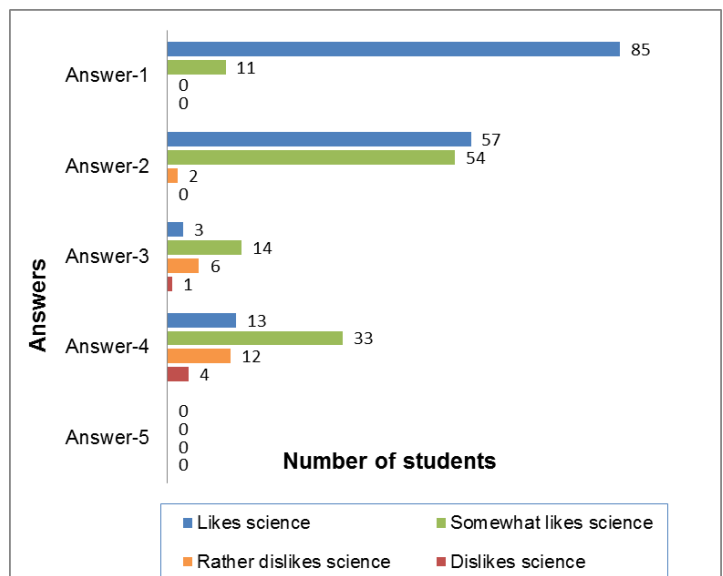


Figure 2. Interest in the fields of science

### 4. Changes in interest after the eclipse

Figure 3 shows the change in the students' interest in science before and after observing the annular solar eclipse.

On May 21, the weather was good, and elementary school students who cooperated with the survey were able to observe the full eclipse. After the eclipse observation, the majority of students who responded developed more interest in science. In addition, it was found that many of the students who said they liked science a little have sustained interest in science. On the other hand, part of a group that answered they dislike science was found to also have students who became interested in science.



Question

Through the eclipse, how has your interest in science changed?

Answer

1. Came to really like science.
2. Became more interested in science.
3. Didn't like science, but began to think it sounds interesting now.
4. There was no change in interest.
5. Came to dislike science more.

Figure 3. Changes in interest after eclipse observation

### 5. Conclusion

- ✓ The number of students who didn't see the eclipse increased little by little by grade as the grade levels became higher. Their interest in science may be subdivided among other interests as they grow up.
- ✓ Also, students' interests for science fields are mostly different for boys and girls. However, astronomy is high with both, and meteorology is low with both.
- ✓ Many students who don't like science think that science is a difficult subject for them.
- ✓ Some of the students who disliked science before that eclipse changed their image of science through that event. Astronomical events such as the solar eclipse have had certain effects.