

# What is wanted for learning about Geopark from school ? Suggestion from Toya Caldera and Usu Volcano Global Geopark

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## Introduction

Now, many school carry out a school trip in Geopark. The school trip is handled as school events mainly. Because all school education is provided along a National course of study that the government decided. The subject to learn "Geopark" is not set in a course of study (MEXT,2008a;2008b;2009). Therefore, the learning of Geopark is not carried out positively. However, the learning material in Geopark is excellent as science and society. Students can learn about the local history and regional industry too. Such learning is made much of in the guidelines on Global Geoparks Network. It is more necessary for us to tell the true value of Geopark to school.

So, we made some textbooks for school trip. The contents of these texts are related to science and society to learn at school (Yokoyama et al.,2013;2015). In this poster, we show you about textbooks we made. Let's discuss about "What is wanted for learning about Geopark from school".

### 1. The number of the tourists and the schools

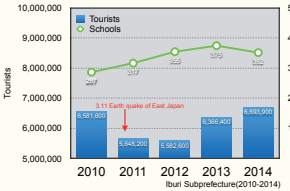


Fig.1 The number of the tourists and the schools which came recent 5 years

Fig.1 show the change of the number of the tourists and the schools which came to Toya-Usu Geopark area recent 5 years.

After Earth quake of East Japan 2011, the number of the tourists is down once. In Japan, the tourists from the foreign country decreased by 27.8% from 2010 (Japan national tourism organization,2011). But the number of the schools increase. So, we think that the needs of the schools for Geopark increase too.

### 2. Concepts to make the textbook

We considered it is important that teachers want to use these textbooks and these textbooks help teachers. So, we made these textbooks along two concepts.

(1)Textbook include learning contents of the subject along the course of study.

(2)Textbook include information for teachers to lead their students.

And more...  
It's made A5 size we can use easily in school trip.  
Everyone can download it from Web FREE!

### 3. About Textbook we made for school trip

#### 3-a Lineup of the Textbook

Let's feel the Change of the Earth in Mt.Usu!

Connected with learning contents of unit "Formation and change of land" of the 6th grade's science.

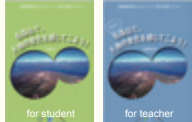


Fig.2 Textbook for school trip (about volcano)

Let's feel the wisdom of ancient people!

Connected with learning contents "Research to ancient history and heritage" of the 6th grade's society.



Fig.3 Textbook for school trip (about ancient history)

Let's study the Birth and Transition of the Forest in Mt.Usu!

Connected with learning contents "Vegetation and transition" of the basic biology studying to learn in high school.



Fig.4 Textbook for school trip (about vegetation)

#### 3-b Character of the Textbook

Contents arranged along the learning process of school trip from pre-learning to post-learning.

##### Pre-learning

Students learn about where they will go to, what is Geopark, what happen around Mt.Usu and history of Toya-Usu Geopark area (Fig.5).

##### Learning at the field

We want students to look and feel a lot at the field. So there are the learning target, check column and memo column to only one page of spread. (Fig.6).

##### Post-learning

There are some blanks filling in a summary and composition after the learning (Fig.7).

##### For teachers...

There are some informations for teachers to lead their students. These informations are attention of leading student and learning instruction not the guidance of viewpoint (Fig.8).

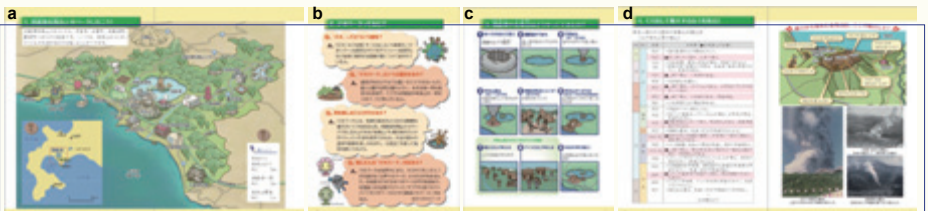


Fig.5 Part of contents about pre-learning of school trip in Textbook:

a: location of the destination, b: about Geopark, c: history of formation of this area, d: about recent eruption

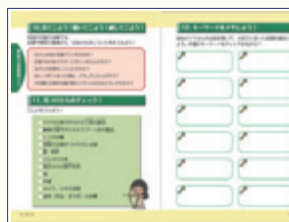


Fig.6 Part to use at the Field



Fig.7 Part to use post-learning



Fig.8 Example of the text for teachers

#### 3-c Other information about the Textbook

On Website, you can look at the study point with local photograph.

When there will be a request that school want to use these text, local guide can guide along these text.



Fig.11

Information for Local guide groups

#### 3-d How do you get the Textbooks ?

If you want get these textbook, go to the Web of Toya-Usu Geopark and click this point.

Or you can go using this QRcode



Fig.12 Website of Toya-Usu Geopark



Fig.13 Download page

#### The textbook will help the student doing research activity by oneself.

In many high schools, opportunities to work on the project studies increase. This textbook suggest to stay in Toya-Usu Geopark area and challenge research activity about vegetation recovery. We show some viewpoint to set a research theme and guidance about the field study (Fig.9).

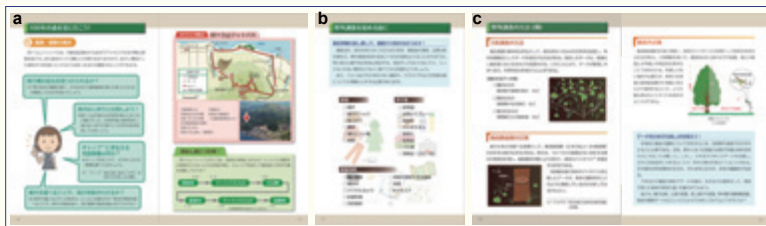


Fig.9 Part of contents in the textbook for High school students want to research study  
a: The example of the research theme and guidance of the study area, b,c: Guidance about the field study method

### 4.Future Activity

- (1)We will change Web system to count the number of the downloading of textbooks.
- (2)We must analyze about the education effect.
- (3)We want to make the textbook for the project learning of the Changing Earth.

### 5. Suggestion from Us

- (1)Listen to the needs of schools, and let's give them information to demand.
- (2)Let's collect the good examples which a school uses the Geopark, and share it in GGN.
- (3)Let's strongly appeal to the educational front for significance to learn in a Geopark.

#### Reference

Iburi Subprefecture(2010). Findings of number of the tourists in Iburi Subprefecture 2010.  
Iburi Subprefecture(2011). Findings of number of the tourists in Iburi Subprefecture 2011.  
Iburi Subprefecture(2012). Findings of number of the tourists in Iburi Subprefecture 2012.  
Iburi Subprefecture(2013). Findings of number of the tourists in Iburi Subprefecture 2013.  
Iburi Subprefecture(2014). Findings of number of the tourists in Iburi Subprefecture 2014.  
Japan national tourism organization(2011).2011 Visitor Arrivals & Japanese Overseas Travelers.  
MEXT(2008a).National course of study for Primary school.  
MEXT(2008b).National course of study for Middle school.  
MEXT(2009).National course of study for High school.  
Yokoyama.H, Nakaya.A, Hirota.T(2013). Making of the text for the field trip of the elementary school in Toya - Usu Global Geopark, Abstracts, the 120th Annual Meeting of the Geological Society of Japan, Geological Society of Japan.  
Yokoyama.H, Takekawa.M, Nakaya.A, Kojima.N(2015). "Outdoor learning text of Toya Caldera and Usu Volcano Global Geopark" which deepen the learning of the student, Abstracts, Japan Geoscience Union Meeting 2015.