

(For JSPS Fellow)

Form B-5

Date (日付)

29/08/2014 (Date/Month/Year: 日/月/年)

**Activity Report -Science Dialogue Program-**  
(サイエンス・ダイアログ事業 実施報告書)

- Fellow's name (講師氏名): Ayzenberg Anton (ID No. P13015)- Participating school (学校名): Fukushima High School- Date (実施日時): 26/08/2014 (Date/Month/Year: 日/月/年)- Lecture title (講演題目): (in English) Polytopes and Topology(in Japanese) 多面体 & 位相幾何学

- Lecture summary (講演概要): Please summary your lecture 200-500 words.

I told some stories and traditions of russian universities, in particular Moscow State University. Also I told what motivated me in childhood to become a mathematician. In mathematical part I showed how topological methods are applied to study polytopes. One of the simplest topological theorems about polytopes is Euler formula  $V-E+F=2$ . I proved it using some demonstration with pictures and balloons. Also I gave a mild introduction to the theory of Betti numbers of topological spaces, using "counting holes" analogies. I showed how this theory may be applied to study polytopes at more advanced level, which is essentially my research area. Also I explained some practical applications of objects introduced in the lecture.

- Language used (使用言語): English

- Lecture format (講演形式):

◆Lecture time (講演時間) 60 min (分), Q&A time (質疑応答時間) 10 min (分) + 60min  
students presentations about their understanding of my lecture

◆Lecture style(ex.: used projector, conducted experiments)

(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))

Projector, demonstrations using kusudamas and balloons\_\_\_\_\_

◆Interpretation(ex.: assistance by accompanied person, provided Japanese explanation by yourself) (通訳 (例: 同行者によるサポート、講師本人による日本語説明))

I provided japanese translation of basic notions on the slides by myself

◆Name and title of accompanied person (同行者 職・氏名)

none

◆Other note worthy information (その他特筆すべき事項):

none

- Impressions and opinions from accompanied person (同行者の方から、本事業に対する意見・感想等がありましたら、お願いいたします。): none