

(For JSPS Fellow)

Form B-5

Date (日付)

29/06/2015 (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): Jonathan Young (ID No. P 14811)- Participating school (学校名): Junior High School at Komaba, University of Tsukuba- Date (実施日時): 20/06/2015 (Date/Month/Year: 日/月/年)- Lecture title (講演題目): (in English) Arizona, Applied Mathematics, and Computational Systems Biology(in Japanese)

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

I discussed the geography, historical people, and various plants and animals of my hometown in Phoenix, Arizona. Some of the more interesting things in Arizona are cacti, scorpions, rattlesnakes, cowboys, Native Americans, Mexicans, and the Grand Canyon. I then talked about a few of the subjects I studied in high school and college that led to my interest in science. I specifically talked about a few ancient geometry problems such as angle trisection and squaring the circle, and also about a problem in mechanical engineering, perpetual motion. I showed a demonstration of a few computer programs that I worked on as a student. One was a demonstration of a depth-first search algorithm used by a robot to solve a maze. The other was an application of singular value decomposition to study the human gait. Lastly, I talked about my current research in systems biology. I gave a quick background of cell biology and signal transduction networks. Also, some of my research is applicable to the burgeoning field of molecular computers, and so I briefly introduced that subject to the students. My lecture was broken up into three major sections, and at the end of each section the students were allowed to ask questions.

- Language used (使用言語): English

- Lecture format (講演形式): Slide Presentation

◆Lecture time (講演時間) 75 min (分), Q&A time (質疑応答時間) 30 min (分)

◆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))

I used a projector and demonstrated a few applied math simulations.

◆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))

The English teacher at the high school provided a Japanese explanation.

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

Ms. Naoko Tao, English Teacher at Junior High School at Komaba, University of Tsukuba

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

The students were very intelligent and asked many thoughtful questions.

- 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。):

The English teacher, Ms. Naoko Tao, said the students were very engaged and seemed very motivated about science and mathematics.