

(For JSPS Fellow)

Form B-5

Date (日付) 1/9/2013

(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) :
(ID No. P 12-333) KOWALCZYK Timothy Daniel

- Participating school (学校名) : Yamanashi Prefectural Yoshida High School

- Date (実施日時) :
(Date/Month/Year:日/月/年) 29/8/2013

- Lecture title (講演題目) : Designing New Molecules on a Computer

コンピューターで目新しい分子をデザインする

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

Computers improve our lives in many ways. They help us be more productive at school and at work; they entertain us with video games; and they help us stay connected to each other through the internet. But computers are also changing the way we do science, saving us time and energy in the process.

In this talk, I will introduce you to the wonderful world of computational chemistry, where we use powerful computers to study and design new molecules for use in products like electronic displays and solar cells. I will discuss the physics and chemistry of solar cells, and I will demonstrate some of the tools we use to simulate molecules on a computer. I also hope to share some of my experiences as a student in the US public education system, as a research assistant at MIT, and as a researcher at Nagoya University.

- Language used (使用言語) : English (with some comments in Japanese from assistant)

Lecture format (講演形式) : Powerpoint presentation and simulation demonstration

◆Lecture time (講演時間) 80 (分), Q&A time (質疑応答時間) 10 (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))

Powerpoint slides on projector, 5-minute movie, 15-minute demo of 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))

Assistance by accompanied person; provided self-introduction in Japanese and explained some of our science to vice principal in Japanese, with help from assisting person.

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

Mr. Yuya Akao, B4 student in the Department of Chemistry, Nagoya University

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

Lecture included a 2-question "quiz" where students voted on multiple-choice questions using colored paper. The questions were asked before and after the science portion of the talk to gauge student understanding. Answers were mixed at first, but mostly correct by the end!

- 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。):

Some students had difficulty following the lecture, but others mostly understood, and had good questions to ask. Students especially enjoyed the demo, video, and interactive quiz.