

(For JSPS Fellow)

Form B-5

Date (日付)

04 / 12 / 2017 (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): BALOIS Maria Vanessa Cases (ID No. P16066)

- Participating school (学校名): Chiba prefectural SAKURA high school

- Date (実施日時): 28 / 11 / 2017 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): How to "see" extremely small things and what we can learn from the nano-world

- Name and title of your company (同行者 職・氏名)

No companion

- Lecture format (講演形式):

◆Lecture time (講演時間) 90 min (分), Q&A time (質疑応答時間) 20 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))

used projector, conducted experiments and had Q&A afterwards

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

My lecture had three parts: (1) self-introduction, (2) why I became scientist and (3) my research. In the first part, I gave a short introduction about myself and my country – the Philippines. In the second part, I told my story on how I became scientist and why I chose to be a scientist. In the third and final part, I spoke about my research, the interesting topics of my research and why I enjoy being a scientist.

I started my lecture with a short introduction about myself, particularly the things I like (hobbies, favorite things, etc). After that, I spoke about the beautiful places and delicious food in the Philippines. My country is quite special because Philippine culture is a mixture of our original culture, Spanish, Chinese and American cultures. All these cultures can be seen and tasted in our food. I later shared two unique points of my educational background: (1) I graduated from a science high school similar to the students who participated in the lecture and I hope that they will also be able to become scientists or engineers in the future. (2) I studied in different places to obtain my Bachelor of Science (Philippines), MS (USA), and PhD (Japan) degrees and ENGLISH was the only way for me to effectively communicate with my mentors and classmate. I emphasized the importance of learning English and how to communicate face-to-face with other people. I ended the first two parts of my talk with some keywords on how to survive in the

scientific world and the world in general. These keywords are: being “simple and strong”, “active and enterprising”, and “self-reliant and self-respecting.” These keywords are the core values of Chiba Prefectural SAKURA High School and I believe these values are important for the students to both survive and succeed in our world today. We took a 10-minute break afterwards.

The second half of my talk started with my research. My research, in a nutshell, is about studying the physical and chemical properties of nanometer size materials, also called “nanomaterials”, through the interaction of light and materials (generally called “matter”). Applications of my research can be found in many research fields, particularly in Biology, Chemistry, and Semiconductor Physics. This is because (1) I can determine many useful material properties such as temperature and strain and (2) I can identify materials in unknown samples and also check if there are defects. I discussed with the students on how I do my experiments, the equipment I use, and the scientific phenomena I observe to analyze my samples. We had a short experiment after my science talk, where we assembled our own spectrometer and observed the diffracted from a grating.

At the end of the Science Dialogue, we had an interesting question and answer portion where the students asked a variety of questions in English, from scientific questions to what food I like. After the event ended, some students approached me to ask more questions and chat a bit.

- Overall advice or comments to future participants in the program (今後の講師へのアドバイス):

I would advise future participants to keep your slides and explanation simple because high school students do not know all the jargon of your research. Speaking slowly will also help a lot. Be dynamic and interactive with the students.

- Other noteworthy information (その他特筆すべき事項):

I am thankful to Teacher Yuki Shiga for coordinating this Science Dialogue in Chiba Prefectural SAKURA High School and encouraging his students to ask questions. I was also impressed by the students because of their interest in science and their active participation during the Science Dialogue.

- Impressions and opinions from a company (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。)

N/A