

Must be typed

(For JSPS Fellow)

Form B-5

Date (日付)  
05/02/2018 (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): Frank Browne (ID No. P16323)

- Participating school (学校名): Hibiya High School

- Date (実施日時): 23/01/2018 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): Nuclear physics: searching for magic at the centre of the atom

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

- Lecture format (講演形式):  
◆Lecture time (講演時間) 60 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))  
Presentation on projector

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

After a self-introduction, I discussed a variety of outstanding British physicists and their contribution to our understanding of the nature of reality. Following this, I gave a historical account of the discovery of the atomic nucleus and its structure. This, naturally, included many more British scientists and achievements, whom were also discussed during this portion of the lecture. Additional to the British physicists, a myriad of international scientists and their achievements were also introduced within this portion of the talk in order to emphasise the importance of collaboration on an international scale. To introduce my personal research interests, I built upon the concepts introduced previously in order to discuss that the "magicity" of nuclei is not as immutable as when conceived. Using a contemporary prediction of a leading Japanese nuclear theoretical physicist, I discussed how my work examines how a we can determine if a very unstable nucleus, not present in nature, can be characterised as magic. In doing so, I presented some preliminary results of my research in order to give the students some feel for what actual data may look like. In the closing portion of the lecture, I tried my best to provide advice based on my own experiences. As per the request of the school liaison, I emphasised the importance of English for communication in large collaborations.

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

As with most things such as this, I think the delivery is rather personal. However, I personally like to give a strong enough background so that the students can understand the basic idea of the cutting-edge research. In my case this meant dwelling a little on some very key historical points.

But, I think the advice would be terribly field-dependent.

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

Students get sleepy, try to ask them questions, keep them on their toes.

- 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。)

I believe the lecture was well received, see the following email,  
Dear Frank -san

Thank you very much for yesterday.  
It was a fruitful opportunity for our students.  
I really appreciate your precious time and consideration again.  
It was a great pleasure that Koyama-san was a graduate of our high school.  
I would like to express special thanks to Sakurai -sensei and members of your laboratory.  
I attached your picture at this mail for your memory.

If there would be a chance to have a lecture regarding atomic physics at my school,  
I would like to ask you for your cooperation again.

Anyway, I hope you are enjoying staying in Japan.  
I am looking forward to seeing you again.  
Thank you very much.

Kindest regards