

(For JSPS Fellow)

Form B-2
(FY2018)

Date (日付)
21/12/2018 (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): HAXTER, Stefan Clemens Karl _____ (ID No. PE18734)
- Participating school (学校名): Akita Prefectural Yokote High School
- Date (実施日時): 20/12/2018 (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): Where Does That Noise Come From?
- Name and title of your accompanying person (講義補助者 職・氏名)
 小澤雄太 東北大学 博士課程 2 年
- Lecture format (講演形式):
 - ◆Lecture time (講演時間) 80 min (分), Q&A time (質疑応答時間) 40 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))
 Lecture was given using a projector; Three small experiments were conducted in which students had to use only their ears to locate persons clapping their hands

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

First, I introduced myself, talked about differences between Germany and Japan and gave some "fun facts". I told the students why I came to Japan and what I liked about it.

The lecture consisted of an introduction to noise and sound. Noise is all around us, yet some noises are more unpleasant than others. Both, the human ears and microphones were introduced as a "device" to measure the sound. A brief video was shown on how sound waves travel through air. The main topic of the lecture was introduced by raising the question of how we know where a sound comes from. As an example, an airplane was used, as this most closely resembles the engineering work I do. A classroom experiment was then conducted in which selected students were asked to wear an eyemask and to locate several other students, who were clapping their hands, by only using their ears. The concept that the time difference between two ears or two microphones can be used to locate the origin of a noise source was then introduced.

Some engineering examples were shown in order to present the scientific applications of this sound location technique. This included pictures from industrial wind tunnels and pictures from measurements using real airplanes. Many pictures were used.

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

The "fun facts" about my country really caught the attention of the students. Please include such things. As an example: one "fact" that they were really astonished about was that stores in Germany are closed on Sundays. After the lecture, one student even asked "What do you do on Sundays if all the stores are closed?" I found that a very curious and good question, as it was aimed at understanding cultural differences.

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

In the initial email that I received from science dialogue, the lecture time was said to be from 13:30-15:00, or 1.5 hours. The school maybe had received a different schedule, because they had prepared for me to give a lecture from 13:30 to 15:30. So the last half hour was a little bit unprepared. If I had known this in advance, I could have prepared the lecture better for the students.

- Impressions and comments from the accompanying person (講義補助者の方から、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。)