

Form B-2
(FY2020)
Must be typed

Date (日付)
09/12/2020 (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) : KOLBE Niklas (ID No. P19701)

- Name and title of the accompanying person (講義補助者の職・氏名)
鞍橋 彩早 (クラハシ アヤサ), 金沢大学 数物科学類 (学類4年生)

- Participating school (学校名) : Fukui Prefectural Koshi High School

- Date (実施日時) : 01/12/2020 (Date/Month/Year: 日/月/年)

- Lecture title (講義題目) : Fighting diseases with math

- Lecture format (講義形式) :
 - ◆ Lecture time (講義時間) 70 min (分), Q&A time (質疑応答時間) 20 min (分)
 - ◆ Lecture style (ex.: used projector, conducted experiments)
(講義方法 (例: プロジェクター使用による講義、実験・実習の有無など))
projector, whiteboard and handouts were used, interactive lecture

- Lecture summary (講義概要) : Please summarize your lecture within 200-500 words.

I started the lecture by giving the students some information about me and my job as a researcher. To this end I showed maps and pictures from the places where I have worked, told about my education and how I happened to come from to Japan to do research. After the introduction I presented a subject from mathematical biology, my field of research, to give an example how mathematics can be used to address real world problems. In particular, I introduced some models of infectious diseases in simplified form adjusted to high school mathematics. I motivated the subject by letting the students make a guess about the speed of the spread of COVID-19 in Japan. Then I introduced a simple model for which I gave the students easy rules and let them compute the number of infections on a prepared handout. Using their computation results we derived the corresponding formula. Afterwards, employing an example case I presented a better model. Using this model I explained the basic reproduction number, which is a key quantity in epidemiology and frequently discussed in the news nowadays. Further I applied the model to give an approximate answer to the question about the corona virus I asked in the beginning.
To conclude my lecture I showed and explained a few pictures with simulation of my research in cancer modeling.

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※弊会記入欄

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

The students showed interested in the subject and actively participated in the lecture. Also, the students asked many questions in the open Q&A session. Their questions proofed their great interest and good understanding of the material to me. They did not only ask about the subjects I presented but also about more general topics about research, universities, life in Germany, etc. Most questions were asked in very good English. Some students who had more questions after the open Q&A session asked in Japanese. Thankfully, Ms. Kurahashi could address these questions. She also assisted with a Japanese explanation during the lecture. I am very grateful for her support. Further, I thank Ms. Yonebayashi for the problem free organization and communication.

- 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。) :

英語のレクチャーを聞いたリ、その内容について英語で話し合う機会が
少なかつたので、大変有意義な時間を過ごさせていたいただきました。