

(For JSPS Fellow)

Form B-5

Date (日付)

29/01/2018 (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): Susanne Benz (ID No. PE17759)

- Participating school (学校名): Wakayama Prefectural Koyo High School

- Date (実施日時): 26/01/2018 (Date/Month/Year: 日/月/年)

- Lecture title (講演題目): Urban Heat Islands - how cities impact temperatures

- Name and title of your company (同行者 職・氏名)
Research Institute for Humanity and Nature, Kyoto

- Lecture format (講演形式):

◆Lecture time (講演時間) 45 min (分), Q&A time (質疑応答時間) 10 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

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

The lecture itself was divided into three parts. In the first part I focused on life in Germany and in the European Union. This included a broad overview of what the European Union is and a comparison of Germany and Japan (population, area etc.). Next, the lecture focused on German culture and introduced our most famous poets and scientists. Additionally the diversity in German culture was described – you only find lederhosen in the south east.

Next I focused on my life growing up in order to inform the students about schooling and university in Germany. Overall this first part on life in Germany took about half the time of the lecture.

Part 2 and 3 of the lecture discussed the science. In part two I discussed the basic principles of urban heat islands, while part 3, the by far shortest part, focused on my work here in Japan on subsurface urban heat islands. The following paragraphs describing these parts were also handed out to the students before the lecture:

In cities it is warmer than outside of cities, often by more than 5°C. This is called "urban heat island". It exists in the air and underground. Often big cities have the most extreme urban heat islands.

Why are cities warmer? For one there are less plants in a city than outside. You might know that walking barefoot on grass feels colder than walking barefoot on a street. Second, people and houses produce heat. For example, when you use a computer it gets warm and when you use

the air conditioning it blasts warm air out of your house.

Urban heat islands are a big problem, especially old people get too hot and get sick. But underground, in the groundwater, urban heat islands are also good. Here they are a sustainable source of heat to warm houses in winter and to warm water for the shower.

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

Use easy language, short sentences and stick to basic principles. In hindsight I should have given more text on my presentation, so students can understand the science even if they don't understand me talking.

Also, if you want to include an experiment make sure to communicate this to the school clearly so you have everything available you need. I made the mistake of not communicating my needs clearly enough and ended up not doing the experiment.

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

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- 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。)

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