

Form B-2
(FY2022)
Must be typed

Date (日付)
21/10/2022 (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): Evan James Gowan (ID No. 21743)

- Name and title of the lecture assistant (講義補助者の職・氏名) n/a

- Participating school (学校名): Oita Prefectural Saikikakujou High School

- Date (実施日時): 20/10/2022 (Date/Month/Year: 日/月/年)

- Lecture title (講義題目): Investigating climate change in the past and present

- Lecture format (講義形式):

[] Onsite ・ Online (Please choose one.) (対面 ・ オンライン (どちらか選択ください。))

Lecture time (講義時間) 60 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))

used projector

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

At the start of the lecture, I introduced myself, and where I come from in Canada. I next introduced what Earth Sciences is as a discipline, and showed three slides describing the aspects of Earth science that I study, namely ice sheets, sea level change and past climate change. I then introduced the places around the world that I have studied and worked at, and emphasized the importance of English to work in Earth Sciences. The second part of my lecture introduced the basics of climate change science. I demonstrated that global warming is happening, giving examples showing that the annual average temperature in Oita City has increased by 2C since 1965, and that the cherry blossom season is getting earlier. Next I described how climate changed in the past. I described how the Earth's climate changed due to slow shifts in the Earth's axis of rotation, and due to fluctuations in carbon dioxide. I described how we measure past changes in the Earth's carbon dioxide concentrations, and changes in ice sheets by measuring the oxygen isotope concentrations in the oceans. I demonstrated that there is a strong relationship between carbon dioxide and climate changes in the past 800,000 years. I then showed that the current carbon dioxide levels are much higher than in the past 800,000 years, and the current warming is due to the increase in carbon dioxide. The third part of my lecture introduced the ways that global warming are affecting Japan. This included effects on agriculture, typhoons and extreme rainfall events. Finally, I gave several suggestions as to the ways that carbon dioxide emissions

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could be reduced. This included shifts to renewable energy resources, encouraging transportation methods like cycling, trains and buses rather than cars and airplanes, and to create more sustainable buildings and ways of living. I ended the lecture by encouraging everyone to become involved in politics and organizations dedicated to reducing carbon dioxide emissions as the best way to make an impact. After the lecture was over, several students asked questions, mostly related to climate change.

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

I included Japanese text on my slides to help the students' understanding of the more complex aspects of my lecture. I was assisted by the teachers to ensure that the text made sense.

- Impressions and comments from the lecture assistant (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。):

n/a