

様式 A-1
(FY2025)

2025 年 12 月 5 日

サイエンス・ダイアログ 実施報告書

1. 学校名:長野県諏訪清陵高等学校
2. 講師氏名:Dr. Matej Sebek
3. 講義補助者氏名:講義補助者なし
4. 実施日時: 2025 年 11 月 28 日 (金) 13:30 ~ 15: 30
5. 参加生徒: 1 年生 11 人、 2 年生 12 人 (合計 23 人)
備考:科学系クラブの生徒と希望者
6. 講義題目: Photonics of 2D materials: from basics to devices
7. 講義概要:自己紹介、出身国紹介、研究内容、日本での生活
8. 講義形式:
対面 ・ オンライン (どちらか選択ください。)
1) 講義時間 90 分 質疑応答時間 30 分
2) 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)
プロジェクター使用による講義
3) 事前学習
有 ・ 無 (どちらか選択ください。)
使用教材: abstract, key words の配布
9. その他特筆すべき事項:

Form B-2
(FY2025)
Must be typed

Date (日付) 10 December

(Date/Month/Year: 日/月/年)

Activity Report -Science Dialogue Program-
(サイエンス・ダイアログ 実施報告書)

- Fellow's name (講師氏名): Matej Sebek (ID No. P24326)
- Name and title of the lecture assistant (講義補助者の職・氏名)
None
- Participating school (学校名): Suwa Seiryō High School
- Date (実施日時): 28. November 2025 (Date/Month/Year: 日/月/年)
- Lecture title (講義題目):
Photonics of 2D materials: from basics to devices
- 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) 45 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.
In my lecture I focused on the internationality of science and importance of learning languages as well as the topic of 2D nanophotonics. I described my whole science journey from high school up to now and gave the students a cultural and geographical context of all the countries in which I conducted research. Then I went on to the main scientific part of my talk which is the topic with which I am dealing with now and covered the basics of semiconductors, 2D materials and the associated light-matter interaction. I also covered the application and future devices that might enrich our society. The students seemed genuinely interested and I received quite a number of questions with private discussions with some of the students continuing after the lecture was over. Some of the students were interested in studying abroad and wanted some tips on how to approach this and what institutions to choose. Others were interested in understanding the physics deeper and we went on to discuss the principles of carrier recombination in semiconductors. In summary I would say that the event was successful and the purpose fulfilled. I was pleasantly surprised by the level of interaction from the students.



Prague 

- My hometown
- Capital of Czech Republic
- Very historical city
- Extremely beautiful

