



様式 A-1
(FY2023)

2024 年 3 月 27 日

サイエンス・ダイアログ 実施報告書

1. 学校名・実施責任者氏名: 豊島岡女子学園高等学校 植村 充
2. 講師氏名: Dr. Puu-Tai YANG
3. 講義補助者氏名: なし
4. 実施日時: 2024 年 3 月 13 日 (水) 10:00 ~ 12:00
5. 参加生徒: 中学1年生 4 人、 中学2年生 1 人、 中学3年生 4 人、
高校1年生 3 人 高校2年生 1 人 (合計 13 人)
備考: 中学1年生～高校2年生を対象に募集しました。
6. 講義題目: Unearthing the Secrets of Soil: Journeying Through Soil Science and Scientific Ventures
7. 講義概要: Imagine delving into the mysterious world beneath our feet—where ions swirl, minerals shift and transform, plants stretch their roots, and unseen organisms communicate silently. In this science dialogue, we embark on a journey to unravel the secrets of the soil. Through simple experiments, we'll explore the wonders of soil science and uncover some aspects of this mysterious and complex system. Our session will begin with a brief self-introduction related to the scientific path, followed by an overview of soil science, hands-on experiments, and an interactive Q&A session. (講師の方より事前に送られてきた講義概要の summary です。)
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 60 分 実験時間 40 分 質疑応答時間 20 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、実験有り
 - 3) 事前学習  有 ・  無 (どちらかに○をしてください。)
使用教材
9. その他特筆すべき事項: 講師の Puu-Tai YANG 先生に、沢山準備していただき素敵な講義を行って頂きました。

Form B-2
(FY2023)
Must be typed

Date (日付)
13/3/2024 (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): Puu-Tai YANG (ID No. P23096)
- Name and title of the accompanying person (講義補助者の職・氏名)
Mr. Mitsuru Uemura
- Participating school (学校名): Toshimagaoka Joshi Gakuen High School
- Date (実施日時): 13/3/2024 (Date/Month/Year: 日/月/年)
- Lecture title (講義題目):
Unearthing the Secrets of Soil: Journeying Through Soil Science and Scientific Ventures
- 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) 120 min (分), Q&A time (質疑応答時間) 10 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))
Lecture with projector and followed with experiments

- Lecture summary (講義概要): Please summarize your lecture within 200-500 words.
The lecture was composed of 30 minutes of self-introduction and research experiences, 40 minutes of lecture on basic soil science, 20 minutes of experiments, and followed by a Q & A session. In the first part of the lecture, I explained how and why I started working on soil science and also introduced the methods that are currently applied in this field. It is crucial to show them that soil science embraces advanced techniques and can do more than in-house bench-scale analysis. The introduction of soil science includes (1) the important roles of soil, (2) the history of soil science, (2) how soil developed over time from rock, and (4) the diversity of soils and how to judge the weather by looking into the soil profiles. It started with some observation by ancient civilizations such as Egypt and progressed into an independent science in the 19th century. To demonstrate the color developed in soil, I showed them minerals with diverse colors and explained how the colors related to rock weathering and soil formation. Two experiments related to soil charges were conducted to show (1) the ability of soil to keep nutrients or toxic elements, and (2) the forces in soils that can maintain the soil structure.

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

- 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。）:

The corresponding person (Uemura-san) was very helpful on organizing the science dialogue, and he also stayed during the lecture. He provided translation when students have questions. I appreciate his support before and during the course.