

様式 A-1
(FY2023)

2023年12月 1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: 学校法人静岡理科大学静岡北高等学校 塚越 汐里
2. 講師氏名: Ashif Aminulloh Fathnan (Ph.D.)
3. 講義補助者氏名: なし
4. 実施日時: 2023年 10月 30日 (月) 13:20 ~ 15:20
5. 参加生徒: 1年生134人、 0年生 0人、 0年生 0人 (合計134人)
備考: 理数科の生徒
6. 講義題目: From Invisibility Cloaking to Beam Forming: Why Metamaterials are Important?
7. 講義概要: 母国であるインドネシアについて、また、今までに学んだ台湾、オーストラリアについての紹介と、研究者とは研究をするということとは、を分かりやすく語ってくださった。また、ご自分の研究内容を分かりやすく説明してくださった。クイズも交えてクイズに正解した者へプレゼントを用意して下さる等、生徒が参加する形の講義であったため、内容を理解するものが多かった。
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 約60分 質疑応答時間 15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)
プロジェクターによってパワーポイントを使用した講義形式
 - 3) 事前学習
有 ・ 無 (どちらかに○をしてください。)
使用教材 アブストラクトを事前に分け、読ませた。研究内容について調べ学習を行った。
9. その他特筆すべき事項:
話の内容が区切りの良いところで生徒たちにクイズ形式にして、話した内容をおさらいさせて下さる等、講義に工夫があり理解が深まった。

Form B-2
(FY2023)
Must be typed

Date (日付)
5/11/2023 (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): Ashif Aminulloh Fathnan (ID No. P22359)

- Name and title of the accompanying person (講義補助者の職・氏名)

- Participating school (学校名): Shizuoka Kita High School (Shizuoka-city, Shizuoka)

- Date (実施日時): 30/10/2023 (Date/Month/Year: 日/月/年)

- Lecture title (講義題目):

From Invisibility Cloaking to Beam Forming: Why Metamaterials are Important?

- 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) 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))

Oral presentation using slides and projector

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

In my recent presentation at Shizuoka Kita High School, I had the pleasure of addressing a captivated audience of 150 first-grade high school students, along with their teachers. The title of my talk was "From Invisibility Cloaking to Beam Forming: Why Metamaterials are Important?" During the 120-minute presentation, I embarked on an exciting journey to explain the fascinating world of metamaterials. These materials have the incredible ability to manipulate light and electromagnetic waves, allowing for extraordinary applications, such as invisibility cloaking and beam forming. I began by introducing myself as an early career scientist, sharing my own experiences and the path that led me to become a scientist. The core of my presentation is about metamaterials and their groundbreaking possibilities. I described how these materials can be used to create invisibility cloaks, like the ones we see in science fiction, and how they can manipulate electromagnetic waves in ways that were once considered impossible. I used practical examples and videos to help the students visualize how this technology could be used in everyday life, such as in making objects invisible.

SD

※弊会記入欄

To keep the students engaged and interactive, I integrated questions throughout my presentation. Five lucky participants who answered my ice-breaking questions received presents, which added an element of excitement to the session. In addition to the main topic, I also took the opportunity to introduce the students to my home country, Indonesia, and the country where I pursued my Ph.D., Australia. I shared a bit about the cultures, landscapes, and educational experiences in these two nations, making the presentation a more holistic and enriching experience. The presentation was followed by an engaging 20-minute Q&A session, during which two teachers and one student asked thoughtful questions. It was heartening to see the students' curiosity and enthusiasm for science.

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

The teachers played a pivotal role in facilitating the session, and their support was instrumental in ensuring a smooth and productive dialogue. Overall, the experience at Shizuoka Kita High School was incredibly fulfilling. It was a chance to inspire the next generation of scientists and to show them that the world of science is not only fascinating but also full of opportunities. I look forward to more such interactions and hope to continue sharing the wonders of science with young minds.

- 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。):



Science Dialogue

From Invisibility Cloaking to Beam Forming: Why Metamaterials are Important?

Ashif Aminulloh Fathnan, Ph.D.

Japan Society for the Promotion of Science (JSPS)
Shizuoka-Kita High School, 30 Oct 2023

贈 平成二十一年度卒業生