

様式 A-1
(FY2025)

令和7年 6月19日

サイエンス・ダイアログ 実施報告書

1. 学校名: 福島県立福島高等学校
2. 講師氏名: Dr. Zonghao XIN (Mr.)
3. 講義補助者氏名:
4. 実施日時: 令和7年 6月18日 (水) 13:10 ~ 15:20 (休憩10分含む)
5. 参加生徒: 普通科3年生40人、 年生 人、 年生 人 (合計 人)
備考: (例: 理数科の生徒)

6. 講義題目: Beauty in brain science

7. 講義概要:

I want to briefly introduce some basic knowledge and techniques of doing research on brain science. I want to introduce why, how, and what to do in brain science based on some research topics conducted by myself or our lab. Even though doing research can be tough, I believe there are many beautiful things hidden in the science to be discovered, and I hope this causal talk could help arousing the interest of students in science (especially brain science) in their future life.

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 質疑応答時間30分 (生徒の質疑・プレゼンの準備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

3) 事前学習

☒有 ・ ☐無 (どちらか選択ください。)

使用教材: 講師から送っていただいた概要(英文)

9. その他特筆すべき事項:

are actually many beautiful things hidden in the science to be discovered, and I hope this causal talk could help arousing the interest of students in science (especially brain science) in their future life.

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

- Impressions and comments from the lecture assistant (講義補助者の方から、本プログラムに対する意見・感想等がありましたら、お願いいたします。):

Thank you for providing this chance for me! I am happy to be able to communicate with young generations and share my experience and thoughts about science. I was touched by the responses from the students after the talk and, I was also inspired by the interesting questions from the students during the talk. Science is a lifestyle for me and I hope students could become more interested in science and technology in their future life.

Form B-2
(FY2025)
Must be typed

Date (日付)
19/6/2025 (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): Zonghao Xin (ID No. P24011)

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

- Participating school (学校名): 福島県立福島高等学校 (Fukushima Prefectural Fukushima High School)

- Date (実施日時): 18/6/2025 (Date/Month/Year: 日/月/年)

- Lecture title (講義題目):

Beauty in brain science

- 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) 30 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))

Projector and PC

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

In this lecture I briefly introduced some basic knowledge and techniques of doing research on brain science. This lecture contains a brief introduction of myself and my country where I shared some culture and scenery of my hometown to the students. I talked about my major in the university and give an example of a technique named brain computer interface (BCI) to the audience so that they can have a straightforward concept of what I was studying. Then I introduced why, how, and what to do in brain science based on some research topics conducted by myself or our lab. I explained the basic structure of the brain from tiny moleculars such as DNA, to macro scale such as we human-beings or even the whole society. Followingly I especially gave a detailed explanation of two techniques of brain science, 1) the electrophysiology recording of neurons and 2) the magnetic resonance imaging (MRI) techniques. The fundamental mechanisms of the two techniques were summarized in a simple format which should be easier to understand by the students. Lastly I showed some real experiment results that were obtained using the two approaches I previously introduced.

By this talk, I hope the students could realize that even though doing research can be tough, there



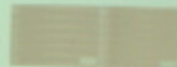
Bioengineering

What is engineering?



Brain computer
interface (BCI)

BCI (BCI)



Electrodes (電極)

is guy

Ref: An overview from the perspective of the user, the perspective of the engineer, and the perspective of the user.