（学校用）

様式 A-1
(FY2024)

2024 年　6 月　25 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：宮城県仙台第一高等学校　大堀和人

2. 講師氏名：Dr. Rehenuma Tabassum

3. 講義補助者氏名：

4. 実施日時：2024 年　6 月　18 日（ 火 ）　14:30　～　16:00

5. 参加生徒：　年生　人、　2　年生　35　人、　年生　人（合計　35　人）
   備考：（例：理数科の生徒）　SS 国際交流選択生徒

6. 講義題目：Unraveling the Secrets of Rice Endosperm

7. 講義概要：

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　80　分　　質疑応答時間　10　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）
      パワーポイント、プロジェクター使用による講義

   3) 事前学習
      （有）・ 無 （どちらかに〇をしてください。）
      使用教材　オリジナルのハンドアウト

9. その他特筆すべき事項：

   特になし。

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Form B-2
(FY2024)
Must be typed

Date（日付）21/6/2024
（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）: Rehenuma TABASSUM （ID No. P23388）

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

- Participating school（学校名）: Sendai Daiichi High School, Miyagi Prefecture

- Date （実施日時）: 18/6/2024 （Date/Month/Year:日/月/年）

- Lecture title（講義題目）:
Unraveling the Secrets of Rice Endosperm

- 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） 90 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））
Using Projector, printed A4 pages of chemical structure of essential amino acid, observation of rice grains of World Rice Core collection, and mini hand rice huller.

- Lecture summary（講義概要）: Please summarize your lecture within 200-500 words.
I began my lecture by sharing insights into my academic journey and my research in agricultural science. I introduced myself with a brief CV that highlighted my educational background and professional experience. The lecture then transitioned to Bangladesh, showcasing its location, climate, and cultural aspects. I displayed images of traditional Bangladeshi foods and highlighted the achievements of Nobel Laureates from Bangladesh. I also discussed Sylhet Agricultural University (SAU), where I work, emphasizing its facilities and academic offerings. My journey to Japan was influenced by the country's advanced research opportunities, global networking prospects, friendly populace, and safety. I emphasized Japan's role in my academic and personal growth. Transitioning to my field of expertise, I explained basic plant biology and showcased my PhD research on the chalky grain mutant *'flo11-2*' of rice. I discussed the global importance of rice, its cultural significance in Japan, and the challenges posed by chalky grains formation due to the effects of global warming in rice production. My PhD research identified *plastid-localized 70-kDa heat shock protein 2 (cpHsp70-2)* as a key gene affecting chalkiness, with daytime temperatures significantly influencing grain quality. I also explained my current postdoctoral

research, which focuses on molecular factors affecting starch granules in rice, particularly the role of *vacuolar invertase (OsINV3)* gene on grain size and starch production. In conclusion, the lecture provided valuable insights into my academic and professional journey, Bangladesh's culture, and the critical research I conduct in Japan. My presentation not only informed students about my research field but also fostered cultural exchange and academic curiosity among the audience.

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

I brought 20 A4 printed pages, each featuring the chemical structure of an essential amino acid. Using these pages, the students construct protein primary, secondary and tartiary strutures by themselves. This hands-on activity allowed them to visualize and understand the complex folding patterns crucial to protein function. Additionally, I showcased the World Rice Core collection, which included a rich diversity of rice accessions from Japan, India, the Phillipines, Loas, Thailand, Italy, and other countries. I demonstrated the use of a mini hand rice huller with some rice panicles to obtain brown rice. Furthermore, the students practically observed the differences between brown rice and polished rice of Grade 1 and Grade 2 from Japan. The students really enjoyed these demonstrations. Overall, the combination of theoretical knowledge and practical demonstrations sparked their enthusiasm, enriching their understanding of rice cultivation and processing.

- 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。）:

Not applicable