SD

※弊会記入欄

（学校用）

様式 A-1

(FY2023)

2023 年 10 月 19 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：岩手県立釜石高等学校・葛西　雄子、押切　道子

2. 講師氏名：Dr.Qian LI

3. 講義補助者氏名：なし

4. 実施日時：2023 年 10 月 18 日 （水） 10:40～12:30

5. 参加生徒：　2 年生 25 人、　　年生　　人、　　年生　　人（合計 25 人）
   備考：（例：理数科の生徒） 理数科の生徒

6. 講義題目：Developments in waste water treatment

7. 講義概要：Wastewater reuse and resource recovery will soon become key aspects of wastewater management strategies worldwide.

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　70 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
      ㊒ ・ 無 （どちらかに〇をしてください。）
      使用教材　Key words and slides

9. その他特筆すべき事項：

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Form B-2
(FY2023)
Must be typed

Date（日付）
19/10/2023 （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）: LI QIAN （ID No. P20794 ）

- Name and title of the accompanying person（講義補助者の職・氏名）
None

- Participating school（学校名）: Iwate Prefectural Kamaishi High School

- Date （実施日時）: 18/10/2023 （Date/Month/Year:日/月/年）

- Lecture title（講義題目）:
Developments in wastewater treatment

- 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） 100 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））
Projector

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

Water resources are important for humans. The total volume of water is large, but the available water resources are insufficient. With the industrial revolution and urbanization, the resource consumption and the pressure on the environment continued to increase. Globally, about 359 billion m3 of wastewater is produced each year, about 48 percent of that water is currently released untreated, which has brought the problem of water environment pollution. Therefore, it is necessary to treat or purify wastewater to some degree before disposal. Wastewater contains a lot of pollutants, such as total solids, organic matters, nutrients (nitrogen and phosphorus), pathogens, heavy metals, etc. Commonly, wastewater is transported through the pipe network to the wastewater treatment plant for centralized treatment. Biological treatment processes are considered as the best choice for wastewater treatment, due to its low cost and relatively high efficiency. Although the current wastewater treatment plant can purify wastewater to some degree before discharge to avoid irreversible pollution to the water environment. Recent year, with the further deterioration of resource crisis, climate change and other issues, traditional wastewater

treatment plants are increasingly regarded as water resource recovery facilities reflecting the value of water, nutrients, energy and other resources, besides ensuring the required effluent quality. Wastewater is no longer waste, but resource! Therefore, wastewater treatment technology must be adequately understood and used. In many countries, the new scheme of wastewater has been launched, some successful cases can provide guidance for the application of new technologies.

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

None

- 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。）:

None