

(For JSPS Fellow)

Form B-2
(FY2018)

Date (日付)
30/11/2018 (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): Philip Reardon _____ (ID No. P17813)
- Participating school (学校名): Shizuoka Kita Junior High School _____
- Date (実施日時): 29/11/2018 _____ (Date/Month/Year: 日/月/年)
- Lecture title (講演題目): Nanomaterials in Tissue Engineering
- Name and title of your accompanying person (講義補助者 職・氏名)
Mr Akihiro Hashimoto _____
- Lecture format (講演形式):
 - ◆Lecture time (講演時間) 90 min (分), Q&A time (質疑応答時間) 30 min (分)
 - ◆Lecture style (ex.: used projector, conducted experiments)
(講演方法 (例: プロジェクター使用による講演、実験・実習の有無など))
Used projector, also provided some samples for the students to interact with _____
- Lecture summary (講演概要): Please summary your lecture 200-500 words.
We might be entering a new age of materials: the nanomaterials age! Nanomaterials are materials that are very very small- a nanometre is a billionth of a metre in size. Nanomaterials are 10 – 100 times smaller than the thickness of a human hair! The small dimensions of these materials can result in them having interesting electrical, mechanical and chemical properties. Materials scientists work to understand those property changes and utilise them in producing new and exciting materials at the nanoscale. Importantly, in biology there exists many naturally occurring functional nanomaterials- for example the fibers of the scaffold that supports and binds cell (the extracellular matrix) of many human tissues have a diameter ranging from 50 to 500 nm. When injury or disease occurs in a human tissue, sometimes treatment is required to replace the damaged area. In tissue engineering materials scientists aim to produce artificial scaffold materials that can be combined with cells and biomolecules to replace human tissue. The unique properties of nanomaterials make them exciting candidates for artificial scaffold materials in many areas of tissue engineering.
- Overall advice or comments to future participants in the program (今後の講師へのアドバイス):
I would recommend the scheme to all fellows. It is a challenging but enjoyable and rewarding experience. I would recommend limiting english to very simple phrasing. Adding in as many

pictures and videos as possible to the presentation to help explain concepts. It was also very helpful to have an accompanying person to help make the proceedings of the day go smoothly. Additionally, good communication with the school is very important to clarify beforehand what the school is expecting, and the facilities available to you.

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

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- 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。)

中学生が実際に大学で行われている研究に触れる良い機会だと思う。また、中学生にとって難しい話題であったが理解しようとしている生徒が多いと感じた。これは講義を厚くサポートしていた先生のおかげであると思った。