

EXCELLENCE *in* TEACHING CONFERENCE

Making STEM a Force for Good

Session 2: Break-out Session Task Card

Task Instructions

1. Read the first vignette individually. (*You may want to mute your video and audio momentarily*)
2. Record **either** a noticing or wondering about the vignette related to each of the three elements of our theme.
Example: "I notice that the lesson directly addresses important math concepts of ratio and proportion when students are asked to scale-up the blueprint drawings."
Example: "I wonder if embedding the science in the context of food desserts would begin to surface issues of equity?"
3. When you are finished with #1 and #2 for the vignette, unmute your video to indicate that you are ready.
4. You will then have the opportunity to talk as a group about improving each vignette.
5. You will repeat steps #1 - #4 for each of the three vignettes before having a closing discussion.

Vignette 1: Mr. Lee's Lab Report

As part of his language arts unit on technical writing, Mr. Lee collaborated with the science teacher to work on the skills of writing a lab report. Students discuss that structure of scientific communication, how scientists represent ideas, arguments, and data in a formal lab report. Students look at various models from peer reviewed journals and write multiple revisions of their reports after going through a structured peer review process. Students publish their lab reports on the school website to help communicate their scientific findings to a broader audience. Students are ultimately assessed not only on their technical writing, but also on how they exercised their role as a peer reviewer.

Analysis

STEM

I notice/I wonder...

A Force

I notice/I wonder...

For Good

I notice/I wonder...

UNIVERSITY OF NOTRE DAME

Center for STEM Education

<https://stemeducation.nd.edu>

Vignette 2: Mr. Isaac's Henrietta Lacks Book Club

Mr. Isaac has planned a unit on the book, *The Immortal Life of Henrietta Lacks*. This book details the true story of a poor black woman who died of cervical cancer in 1951, but whose tumor cells were taken without her knowledge and used widely for medical research, including the development of vaccines, cancer treatments, and cloning. Mr. Isaac has students read and discuss the themes in 'book club' groups, rotating the facilitation. At the conclusion of the book, each group uses different rhetorical techniques that effectively communicate to the public about the life of a person or group whose exploitation ultimately promoted the common good, but raised questions about protecting the dignity of the individual.

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Vignette 3: Ms. Oz's Oral Histories

As part of a history/social studies unit on the role of science and technology in society, Ms. Oz has students collect oral histories of often marginalized groups in science and engineering, specifically women and racially underrepresented scientists and engineers. Ms. Oz assigns students to a member of the local community and provides students with a set of questions that they are to ask their interviewee. The oral histories had to explore the STEM content of that STEM professional's career, but also capture how they were treated in the science arena, how they were able or unable to participate fully as part of the community, and the obstacles that they had to overcome. Students wrote up a final oral history report at the end of the unit.

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