**Appendix**

**Table A:** Activity description and agenda for Introductory Module on Scientific Argumentation, Session 4, *How do we support students in interacting with peers during argumentation?*

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| Activity | Description |
| Extension discussion - Try it with your students! (Optional) | Share your experience:   * Share the lesson you developed to focus on reasoning, as well as any student artifacts you may have.   Discussion Questions:   * What went well with the lesson? Why do you think it went well? * What was challenging with the lesson? Why do you think it was challenging? |
| Video & Discussion: Encouraging student interactions | Watch the video below, which focuses on the interactive nature of argumentation.  Discussion Questions:   * What are the benefits to having your students interact with peers during argumentation tasks? * What challenges do you think your students might have when engaged in this work? * What types of activities (e.g. writing arguments, science seminar) can you envision incorporating into your instruction to encourage student-to-student interactions? Why? |
| Activity: Analyzing data with peers | The task:  Examine results from three studies to develop the strongest argument in response to the question – When a person trains to become an athlete, how does her body change to become better at releasing energy?  Work with others as you engage in this task, making sure to: listen to one another, ask each other questions, build off other's ideas, critique ideas that you do not agree with, and be convincing  ​  Background Science Content:   * When the human body exercises, cells need more energy. * The mitochondria in cells need both glucose and oxygen to release energy. * The body systems work together to deliver glucose and oxygen to the cells in the body.   Discussion about Activity:   * What did you talk about when you engaged in this task? * How did interacting with others influence the argument you developed? * What types of supports do you think your students might need to engage in this element of argumentation? |
| Discussion: Connections between argumentation elements | Discussion Questions:   * How do you see these elements working together? * What strengths do you see in using these argumentation elements in your classroom? * What challenges do you think your students will have engaging in these argumentation elements? * What questions do you still have about these elements? |
| Session takeaways | * Argumentation entails students questioning, critiquing and building off of their peer's ideas * Persuading others of the strength of a claim is an authentic goal of argumentation * Interacting with peers can help students develop stronger arguments * Students can convince an audience of an argument through both writing and speaking tasks |
| Extension - Try it with your students! (Optional) | The task:   * Develop or revise a lesson to encourage students to interact with their peers during an argumentation task. This lesson could be a science seminar, making sense of data from an investigation, writing a persuasive argument, or another activity. * Meet with colleagues to share the lesson you developed, as well as potentially student artifacts (such as writing) or a video clip of students engaged in this. |