**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?
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| 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?
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| 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?
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| 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?
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| 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
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| 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.
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