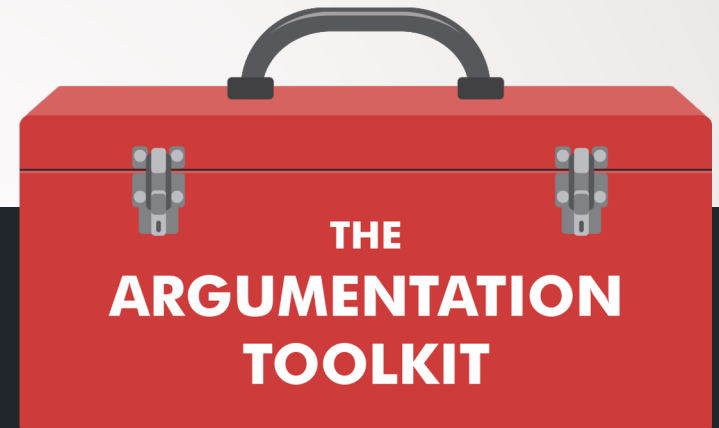


Advanced Module on Evidence and Reasoning



How can you create classroom activities to target whole class challenges with evidence and reasoning?

Session Agenda

How can you create classroom activities to target whole class challenges with evidence and reasoning?

- Extension Discussion – Using the Reasoning Rubric!
 1. Video: Student Argument
 1. Presentation: Supporting Activity Planning tool
 1. Workshop: Design Your Own Activity
 1. Takeaways

Extension Discussion: *Using the Reasoning Rubric!*

After the last session, we asked you to use the Evidence Rubric to evaluate student use of evidence in a written or oral argument.

Discussion Questions:

- What were the strengths of your student use of reasoning? What were the weaknesses?
- How could you use this information about student use of reasoning to guide your instruction?
- What challenges did you encounter in using the rubric?

1. Video: Student Argument



Watch a video of a student reading his argument at the link below.

Discussion Questions:

- What evidence does he use in his argument?
- What reasoning does he use in his argument?
- What feedback would you provide to improve his argument?

2. Presentation: Supporting Activity Planning Tool

Argumentation Supporting Activity Planning Tool: Student Use of Evidence and Reasoning

Directions: Considering your students' challenges with evidence and reasoning, think about how each of these activities might help your students. Include notes explaining how an activity might address a particular challenge.

	Challenges with Evidence			Challenges with Reasoning	
	Source	Relevance	Sufficiency	Connecting	Science Ideas
Evidence Card Sort, 1 Claim					
Evidence Card Sort, 2 Claims					
Evidence Gradient Tool					
Hands-on Activity Gathering Evidence					
Small Group Discussion					
Using Rubric for Peer Feedback					



3. Workshop: Design Your Own Activity

The Task:

- Independently, identify an element of either evidence or reasoning that is particularly challenging for your students.
- Using your completion of the planning tool design an activity to support students' use of argumentation in that area.
- While designing your activity, you may work independently or with a peer/in groups. Groups can be arranged by either the argumentation challenge or the activity to provide each other with support.
- Be prepared to share what you came up with.

Design Tips for Activities that Support Rich Use of Evidence and Reasoning

- Have evidence students don't need to use. This creates a need for reasoning (i.e. why did you not include one or more pieces of evidence?).
- Make sure the question students are answering is not directly answered by the data. This requires students to make a connection between the data and the claim they are making.
- Include different types of evidence sources and evidence of different quality. This requires students to be critical.

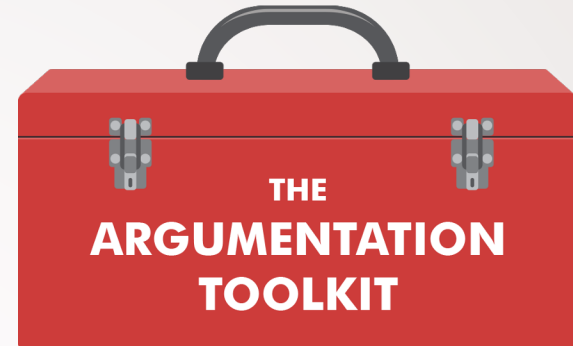
4. Session Takeaways

The evidence and reasoning rubrics can be used to identify the challenges classes face, as well as individuals.

The Supporting Activities Planning Tool can be used as a resource to help teachers plan activities targeting the challenges students encounter using evidence and reasoning.



The Learning
Design Group



PARTNERS AND RECOGNITION



Developed in collaboration
with Boston College



Funding provided by
National Science Foundation

NSF DRL-1119584

Any opinion, findings, and conclusions or
recommendations expressed in this material are those of
the author(s) and do not necessarily reflect the views of
the National Science Foundation.

