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DG19 Effective Content Area Writing Strategies in Science and Math (grades 6-12)

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**Together let's create
extraordinary
classrooms.**

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What Matters in Writing for Math and Science?

- Expressing what we know and understand about writing in written text.
- Activities and strategies to develop skills in argumentation, informational writing, and research writing.



Teens Love to Argue,
We Need to Let Them

Teenagers Love to Argue.....

We need to let them....



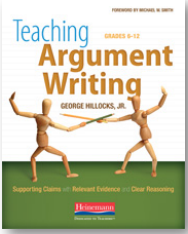
Write arguments to support claims
in an analysis of substantive topics
or texts, using valid reasoning
and relevant
and sufficient evidence.

Why Does Argument Matter in Writing?

Directions: Turn to some of your nearby colleagues and discuss why and how you teach argumentation and writing.

Effective Teaching


According to Hillocks:
“...the kind of teaching in which students learn to do, with support, what they cannot do or do not already do themselves, the kind of teaching in which students learn happily, willingly, even enthusiastically.”



Teaching Argument Writing
GRADES 6-12
GEORGE HILLOCKS, JR.
Supporting Claims • Present Evidence • Draw Reasoning


The Basics of Argument

Hillocks uses murder mysteries to teach students the basics of argumentation.




"Ya Know" vs Purposeful Academic Language Development

-  **claim**
-  **evidence**
-  **reasoning**
-  **counter-claim**
-  **audience-appropriate language**

 **claim**

- Answers a specific question given in a prompt or asserts an independent claim generated by the student.
- Claim statement often suggests/addresses an audience.
- Tells readers why the issue is significant*. Providing key words as part of an essential question unit often helps students express this significance and their reasoning. For example, in discussions of Facebook and teens, "privacy," "freedom," and "safety" are key terms students will need.

*CCSS

 **evidence**

- Quotations from the text (Word for Word).
- Summary of text.
- Paraphrased information.
- Facts & statistics.
- Anyone engaged in the argument can find this and use it.



reasoning

- The source of the greatest language and cognitive demands.
- This is thinking spelled out.
- Answers this question: "How does that evidence help prove the claim?"
- Where rigor and learning reside.



counter-claim

- Bring it on! The counter-claim challenges students to consider other viewpoints by asking them to state an opponent's argument and to develop a rebuttal from a shared value.
- A natural and serious game, debate is animated by counter-argument. Responsiveness to another argument makes the counter-claim in writing, play, discussion, or creation the most engaging aspect of *cerc*a.
- Exploring opposing viewpoints is a strong thread throughout all academic standards, from the College Readiness Standards to the Common Core Standards. It is also a skill featured prominently in Advanced Placement assessments across disciplines.



audience-appropriate language

- Academic Language Learners (ALLs) and English Language Learners (ELLs) struggle with the power of their own ideas because they often lack the language or the confidence to express the abstract concepts and complex ideas that are the basis of reason- giving in all forms of argumentation.
- Academic terms, discipline-specific sentence frames, and arguespeak can be provided to scaffold these challenges.
- In reading, students can begin to see arguments with a kind of X-ray vision when they are given this support, providing more support and practice for challenging reading.
- Students can be taught about correct usage, punctuation, or even the aptness of a word choice, when we pay regular attention to these details within a systematic program.

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