

Bell Ringer! Take a moment and write a response to this as we wait to begin...





**DeafTEC**  
Technological Education Center for  
Deaf and Hard-of-Hearing Students

*Writing in the Disciplines -  
YES! You Can Write in  
STEM Courses!*

Informal/Low-Stakes Writing in STEM

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# Agenda

- Writing in a Second Language
- Types of Writing
- Ways to Incorporate Low-Stakes Writing into Your Classes



# Writing in a Second Language

- How many of you have learned a second (or third!) language?
- Now, take 1 minute and write why you like teaching in STEM--**in your second (or third) language**. **NO WRITING IN ENGLISH**, even if it's your second language 😊.
- **Ready, Set, GO!**



# Ten Year Rule

- It requires 10 years to learn a skill and to be **proficient** at it as well (Robert Kellogg).
- Take one minute and write about how this fact “hits you” and the impact of this fact on our DHH students.
  - Share with a partner
  - Share with group

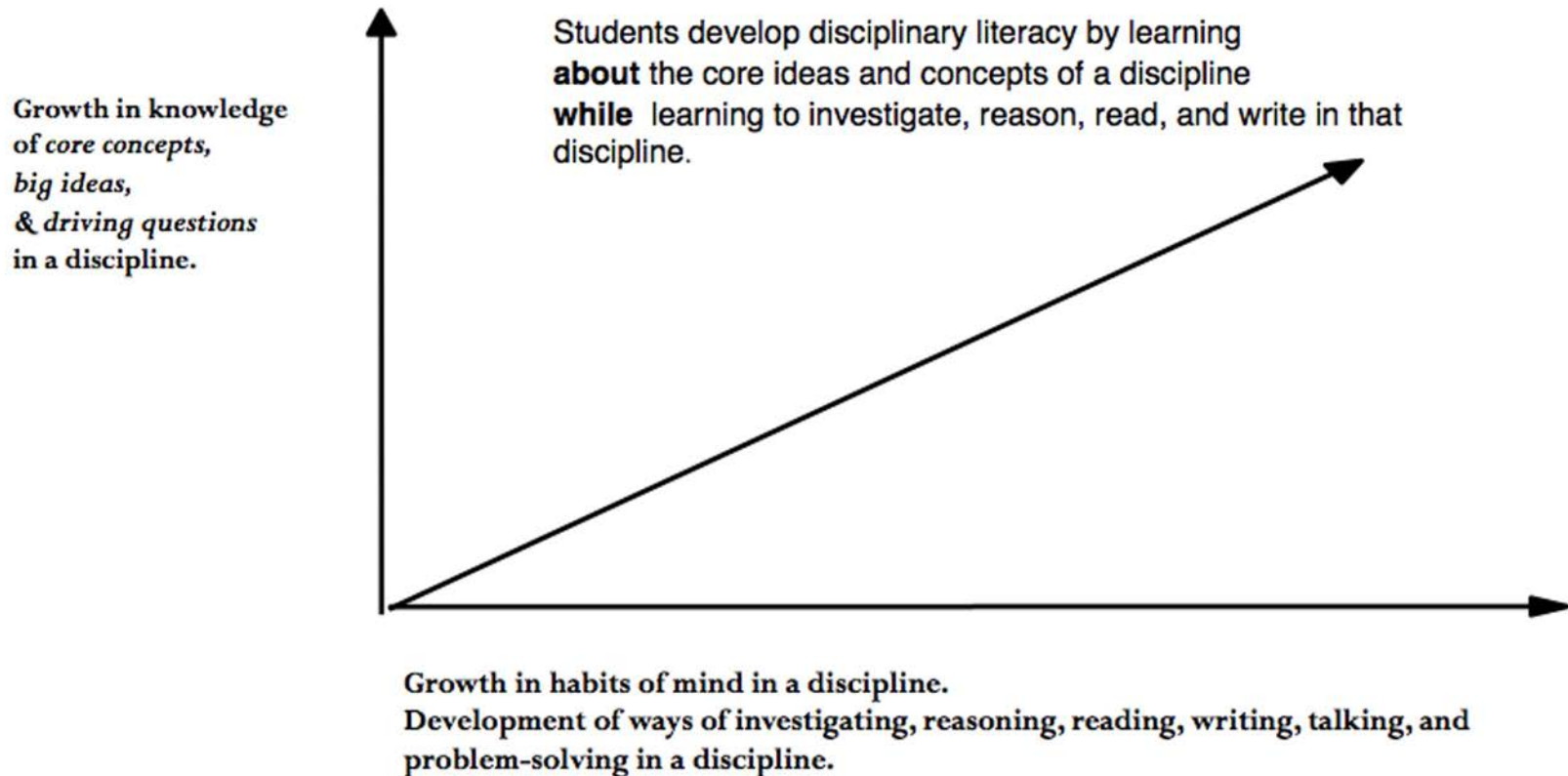
# Writing in Class

- Do you ever have students write during class?
- If so, what kinds of writing tasks do you give them?
- If not, what prevents you from doing so?
- Talk with your neighbors, then be ready to share and discuss. You have three minutes.

# Disciplinary Literacy--Condensed

## Content

For students to become literate in a content area or discipline, they need to develop knowledge along two dimensions



## Process

# Informal/Low-Stakes Writing

- What comes to your mind when you see the phrase “Informal Writing” or “Low-Stakes Writing”
  - “Thinking on paper”
  - A way of learning
  - Strengthening content, not excluding it
  - Students can discover, clarify and strengthen information
- Different types and purposes



# Types of Disciplinary Writing

- Writing to Learn
  - Helps us to organize and incorporate new concepts
  - Focuses on ideas rather than correctness
  - Less structured and more informal
  - Examples include journals, summaries, answers to questions, free writing, and notes
- Writing to Demonstrate Knowledge
  - Helps us show what we've learned
  - Synthesize and show new connections between ideas
  - Make the information understandable to a particular audience/purpose
  - Could take the form of reports, essays, letters to the editor, creative writing, and writing for websites or other projects

# Informal/Low-Stakes Writing

- Writing at the beginning of class to probe a subject:
  - What questions do you have about last night's reading?
  - What does it mean when the article says...?
  - Write down everything you remember from...

# Informal/Low-Stakes Writing

- Writing at the beginning of class to stimulate interest in what's coming:
  - Use a question to “prime the pump” for the day’s discussion.
  - What experience do you have with...(insert subject/concept)?
  - What do you think will be most interesting about learning how to...(insert concept here)?

# Informal/Low-Stakes Writing

- Writing at the beginning of class to provide cognitive dissonance:
  - Something the text suggests is true, controversial, and/or posing a problem that has multiple solutions or interpretations.
  - Examples:
    - Stem cell research
    - Climate Change
    - Self-Driving Cars
    - Use of Robotics vs Humans in a factory/work place

# Informal/Low-Stakes Writing

- Writing at the beginning of class to analyze the content of a reading or lecture:
  - Which example in the chapter/reading for homework OR in the previous lecture is the most helpful in understanding this concept? WHY?
- What might be difficult for students about these types of questions?

# Writing At-the-Beginning of Class Wrap-Up



- Take two minutes and write a response to this question:
  - At this time, how do you see yourself being able to use these strategies?
- Now, share with one or two others in your group.
- Things you learned from each other? Any insights you would like to share?



# Informal/Low-Stakes Writing

- Writing during class:
  - To refocus a lagging discussion (Write about this point...)
  - To cool off a heated discussion (Now, write from the opposing viewpoint.)
  - To ask questions (Ask me questions you want answered.)

# Informal/Low-Stakes Writing

- Writing during class:
  - To express confusion (Tell me what is confusing you right now.)
  - To allow all to share (Everyone write for 2 minutes, summarize our discussion/activity/etc.)
  - To review the steps of a process/procedure.
  - In your group, take two minutes to discuss how you might use writing during class in your classroom.





# Informal/Low-Stakes Writing

- Writing at the end of class to sum up the day's work
  - Ask students to write a question and submit it on a piece of paper to be used for review in the next class.
  - What's the most important thing you learned today?

# Informal/Low-Stakes Writing

- Writing at the end of class to sum up a discussion or lecture
  - What continues to baffle you about this topic?
  - What do you expect/need to learn about this topic the next time you come to class?
- With a partner, take two minutes to discuss how you might use writing at the end of class in your classroom this school year.



# Informal/Low Stakes Writing

- Out of class writing activities—  
Journal Writing
  - Open-ended
  - Directed responses
  - Contemporary issues
  - Exam preparation journal



# Informal/Low Stakes Writing

- Out of class writing activities—  
Reading Journals:
  - Use margins to summarize a section, argue, ask a question
  - Reading logs: write about what they are reading: summary, analysis, evaluation, connection to personal experience
  - Other ideas??

# Informal/Low Stakes Writing

- Out of class writing activities—  
Creativity Exercises:
  - Writing dialogues: Imagine meeting the author of this theory or the developer of this software. Have a conversation with him/her.
  - Playing metaphor games.
  - Others??
  - With a partner, take two minutes to discuss how you might use writing outside of class in your classroom this school year.

# Activity

- Choose one of the informal/low-stakes writing ideas we've discussed that you have **never used** and write up a prompt or activity that you could use in your classroom.
- Share your idea with your group.



# Resources

- <http://visualprompts.weebly.com/stem.html>

# Questions/Comments?

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- Please feel free to email if you have questions!