

# Part

# 1

## BOOKS



**"Yes, we have *Chicken Soup for the Math Teacher's Soul*.  
The price is  $\$475 \div 23 \times .018^2 - Y^3 + 4X \div \$73.99999 + 2$ ."**

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## Ideas for Using Articles in Professional Development

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## Overview

Here we offer a few ideas of how to incorporate these articles in a professional development session or university classroom, although many other creative techniques can be used to engage small groups in discussion. You will also find specific suggestions for articles embedded in the articles themselves.

—Editors

## Suggestions

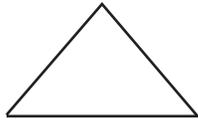
### **Use the strategies, tasks, or vignettes prior to reading the article**

When an article includes a mathematical problem, first ask teachers to engage in the task themselves, just as the article describes students' being engaged in the task in a classroom. Next, model the process of sharing a solution with a group of peers. Additionally, encourage teachers to share strategies they anticipate using and barriers they anticipate encountering when they employ this task with their students. Similarly, asking participants to compare vignettes that have been lifted out of an article prior to reading it is a way to raise curiosity and awareness before to reading the full article.

### **Allow for Opportunities to Discuss the Article Collaboratively**

Because we each take away different things when we read something, sharing our “ahas” can help others glean more from the article. Opportunities for such sharing can be offered in simple ways, such as by providing ten minutes of time for exchange of ideas, as well as in more elaborate, entertaining ways. The following activities have been used successfully with collaborative groups of teachers in professional development settings.

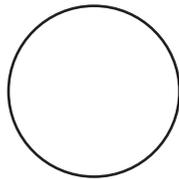
Use information in the article to respond to each of following prompts.



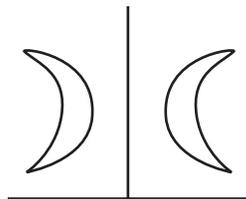
Three main points:



Two things that hold square with your beliefs:



One thing that is going around and around in your head:



One thing that caused you to reflect on your own beliefs and/or practice:

From *Growing Professionally*, edited by Jennifer M. Bay-Williams and Karen Karp (Reston, Va.: NCTM, 2008)

*This coding later can be used in sharing, with each symbol being the focus of a round of discussion. Or, a poster can be prepared with each symbol, and groups can rotate to each station to record their group's comments for that symbol.*

## Rapporting (Not Reporting)

Ask teachers to read the article and relate the author's perspectives to their own. Give the teachers stacks of sticky notes, and ask them to write notes to the authors with the intent of delving deeper into the author's thinking or actions. Prompts for this activity might include—

- Relating one's own experiences that challenge or support the ideas in the article;
- Relating one's own experiences of learning school mathematics as compared with learning mathematics in the ways suggested in the article; and
- Asking the author further details, including next steps in implementing the ideas put forth in the article.

Answering these types of questions by jotting notes as one reads is a different approach to note-taking, resulting in a rapport of sorts with the author or authors of an article. The sticky notes can be shared after reading or can be sorted and organized by the group to further discuss the big ideas of the article.

From *Growing Professionally*, edited by Jennifer M. Bay-Williams and Karen Karp (Reston, Va.: NCTM, 2008)

## Coding the Text

Adapted from the 4As Text Protocol, National School Reform Faculty (NSRF 2007)

Use the following markings as you read the text:

! = Important points

✓ = Things that you agree with

? = Question related to statement or idea presented

↔ = Connections with something else

*This coding can later be used in a sharing session, with each symbol being the focus of a round of discussion. Alternatively, a poster can be prepared for each symbol, and groups can rotate to each station to record the group members' comments relating to that symbol.*

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## Significant SenTENCes

Ask participants to review the highlighting in the article they read, and with their group members to select ten (or a number of your choice) main sentences that are the essential points in improving students' performance.

Record (in short phrases if possible) each sentence on a sticky note or note card. Once each group has recorded its ten phrases, intergroup sharing can occur in two ways. In one approach, group members post all their selected sentences, then sort them according to repeated or related ideas. Alternatively, groups can trade sets and report similarities and differences in the ideas they prioritized in the article.

From *Growing Professionally*, edited by Jennifer M. Bay-Williams and Karen Karp (Reston, Va.: NCTM, 2008)

## **Share-Listen-Respond**

### **Adapted from NSRF (2007)**

Ask teachers to identify one important passage in the article.

In turn, each participant has 2 minutes to share the passage he or she selected and the reasons for picking it. Each group member then has 1 minute to extend, clarify, counter, or question the passage. After each person has had a turn, the originator of the passage gets a 1-minute rebuttal to offer reactions and reveal her or his current thinking in relation to what was heard from colleagues.

In a group of four participants, this activity takes 6 minutes per person. If each person has a turn, the discussion will take 25 minutes. If less time is available, groups of three can be used; or time allotments can be cut in half; or just one person can be chosen to take the lead on an article, with roles to be rotated on the next article.

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## Gallery Walk

To prepare for this discussion, prepare a large poster for each group, each with its own header. If using the “How Does the Article Shape Up?” activity described on page 8, for example, one poster would be labeled “Main Points”; another, “Round and Round”; and so on. Poster headers can be anything you like, including provocative questions.

Give members of each team same-color markers to keep with them as they rotate. At their first station, have them record the ideas that are shared among their group members. After about 5 minutes, have groups rotate to the next station.

At the new station, group members use their colored marker to (1) place a star next to ideas they agree with, (2) place a question mark next to ideas they are not necessarily sure of, and (3) add their own ideas.

Continue this process until the group returns to its original station. Give members 5–10 minutes to read and prepare a summary of the ideas presented on their poster.

*From Growing Professionally, edited by Jennifer M. Bay-Williams and Karen Karp (Reston, Va.: NCTM, 2008)*