Connecting Practice and Research
in Mathematics Education

Professional Learning Guide

Graphic Organizers

Ontario

Graphic Organizers

Graphic organizers are visual representations, models, or illustrations that show relationships among key concepts, words, or ideas involved in a lesson, unit, or learning task.

> **Mathematics is the most difficult content area material to read because:**
> **"there are more concepts per word, per sentence, and per paragraph than in any other subject" and "the mixture of words, numerals, letters, symbols, and graphics require the reader to shift from one type of vocabulary to another."**
> **Braselton and Decker (1994) p. 276**

In your classroom, this means:

- giving students specific assistance in understanding mathematical language;
- using strategies that focus on improving content reading in mathematics;
- explicitly making connections and showing relationships in mathematics;
- showing a variety of ways to represent ideas and concepts in mathematics.

Considerations

- The use of graphic organizers is an effective strategy to improve understanding of the vocabulary of mathematics and subsequent content reading.
- Graphic organizers can help make explicit connections and relationships between vocabulary words, ideas, or concepts.
- Graphic organizers help students to sort, classify, categorize, and cluster information and make it easier to recall.
- Graphic organizers in and of themselves are not sufficient to develop meaning and understanding. Combined with background knowledge; they can be powerful visual organizers to assist all students in learning mathematics.

For more information go to:
http://www.edu.gov.on.ca/eng/studentsuccess/lms/files/tips4rm/TIPS4RMDevMathLit.pdf
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My Personal Reflection and Plan

I use graphic organizers in mathematics classes:

☐ never   ☐ occasionally   ☐ at every opportunity

How many times and in what ways have I used graphical organizers? Describe how they were used.

What are characteristics of students who might most benefit from using graphic organizers?

How can I begin to use graphic organizers more often in my math class?

With "SMART Ideas™" software, I can create concept maps, and use built-in templates to show relationships between ideas. How might I learn about "SMART Ideas™?"

Other ideas and thoughts I have after hearing the comments of my peers:

Next Steps

Lesson from TIPS4RM that I will teach to focus on using graphic organizers:

Lesson Goal:

Why this lesson lends itself to using a graphic organizer:

What benefits to students am I anticipating as a result of using a graphic organizer?

What items are needed to prepare students for using a graphic organizer?

Other notes:

Lesson Debrief

Evidence that the use of a graphic organizer was successful:

How did students benefit from using a graphic organizer?

Reflection

- What went smoothly?

- What created challenges?

- How can I use graphic organizers in future lessons?

Other ideas and thoughts I have after discussion with my peers: