Generating Math Talk that Supports Mathematical Thinking and Learning

Mrs Cynthia Seto

Master Teacher

Primary Mathematics Chapter

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Math Talk





Why Math Talk?

Talk Is Critical to Teaching and Learning as it can

- 1. Reveal understanding and misunderstanding
- Supports robust learning by boosting memory
- 3. Supports deeper reasoning
- 4. Supports language development
- 5. Supports development of social skills



Mathematics

What is Mathematics?

Mathematics is the science of patterns.

Delvin, 2000, p 3.

Delvin K.J. (1998, 2000). The Language of mathematics: Making the invisible visible. New York: Freeman & Company.

Language of Mathematics

When two numbers are added, their order is not important.

In symbolic form:

$$a + b = b + a$$



Talk Moves

- 1. Move 1: Revoicing
 - "You're saying it's an odd number, is that what you mean?"
- 2. Move 2: Repeating
 - "Can you repeat what he just said in your own words?"
- 3. Move 3: Reasoning
 - "Do you agree or disagree and why?"
- 4. Move 4: Adding On
 - "Would someone like to add something more to this?"
- 5. Move 5: Wait Time
 - "Take your time...we'll wait...."



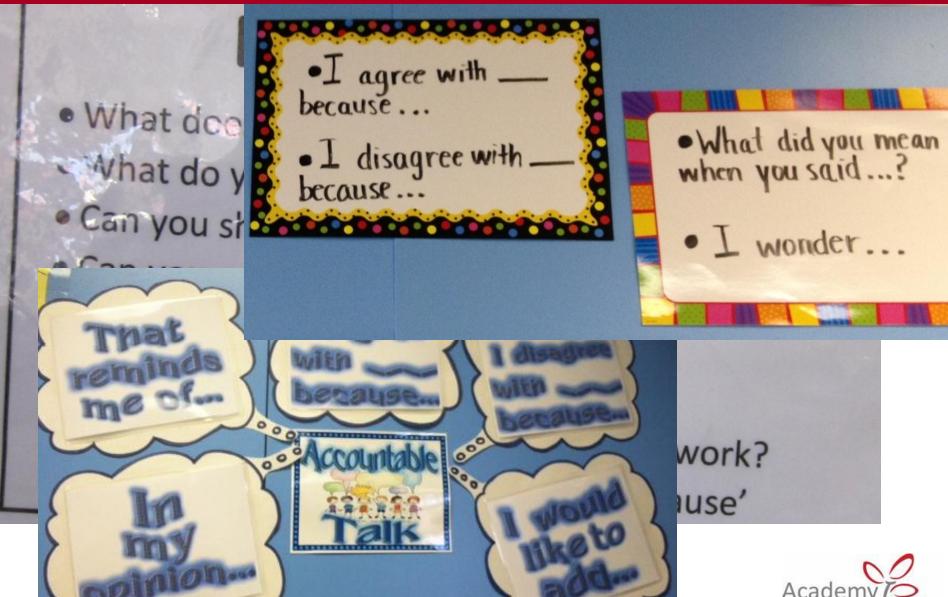
Routines for Math Talk

Establish ground rules for respectful and courteous talk until the rules become a routine part of your classroom culture

- Every pupil is listening to what others say
- Every pupil can hear what others say
- iii. Every pupil may participate by speaking out at some point



Prompts for Group Conversation



Conclusion: Generating Math Talk

- 1. Talk Moves is an essential tool in math lessons
 - A roadmap for managing the flow of talk:
 - When do I speak and why?
 - When do students speak and why?
 - How can I make sure that all students participate?
 - How can I maintain the focus in the mathematical concepts if the students talk more?
 - What sort of talk is mathematical talk?



Conclusion: Generating Math Talk

- 2. Providing opportunities for students to
 - Explain and justify their mathematical reasoning
 - Inquire into and explore the mathematical thinking of others and
 - Justify and challenge the thinking of others when appropriate

