Talk! Talk!
And More Math TALK!

Presented by Connie Hamilton Ed.S.
Elbow Partner

What was your experience like as a math student?
Let’s try that again
Partner A: Ask partner B, “What caused you to choose this session?”

LISTEN CAREFULLY

Partner A: Paraphrase partner B’s thinking
Reflect on the two conversations
Learning Intentions

1. Identify
   - Identify where listening is evident in the math competencies

2. Make
   - Make connections between effective listening skills and quality conversations

3. Explore
   - Explore student talk protocols that emphasize listening
Where do others see listening within the math competencies?

<table>
<thead>
<tr>
<th>British Columbia’s Math Competencies</th>
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<tr>
<td><strong>Reasoning and Analyzing</strong></td>
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<tr>
<td>- Use logic and patterns to solve puzzles and play games.</td>
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<tr>
<td>- Use reasoning and logic to explore, analyze, and apply mathematical ideas.</td>
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<td>- Estimate reasonably</td>
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<tr>
<td>- Demonstrate and apply mental math strategies</td>
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<tr>
<td>- Use tools or technology to explore and create patterns and relationships and test conjectures</td>
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<td>- Model mathematics in contextualized experiences</td>
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<tr>
<td><strong>Understanding and Solving</strong></td>
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<tr>
<td>- Apply multiple strategies to solve problems in both abstract and contextualized situations</td>
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<td>- Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving</td>
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<td>- Visualize to explore mathematical concepts</td>
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<td>- Engage in problem-solving experiences that are connected to place, story, cultural practices, and perspectives relevant to local First Peoples communities, the local community and other cultures.</td>
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<td><strong>Communicating and Representing</strong></td>
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<tr>
<td>- Use mathematical vocabulary and language to contribute to mathematical discussions</td>
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<td>- Explain and justify mathematical ideas and decisions</td>
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<td>- Communicate mathematical thinking in many ways</td>
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<td>- Represent mathematical ideas in concrete, pictorial, and symbolic forms</td>
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<td><strong>Connecting and Reflecting</strong></td>
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<td>- Reflect on mathematical thinking</td>
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<td>- Connect mathematical concepts to each other and to other areas and personal interests</td>
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<td>- Use mathematical arguments to support personal choices</td>
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<td>- Incorporate First Peoples worldviews and perspectives to make connections to mathematical concepts</td>
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(Name) said listening fits in the mathematical competencies...
John Hattie’s Meta Analysis

Dialogic Instruction

Effect Size
0.82
Accountable Talk

Begin with paraphrase and add...

- I agree/disagree with (name) because...
- To build on what (name) said, I would like to add...
- When (name) said _____, it made me wonder...
- After listening, I have a new question for (name)...
- Another way to look at what (name) said is...
- I support (name’s) thinking because...
- I used to think ____, but after listening to (name) I think ____.
- ...which made me think...
Give One – Get One

• Write down 3+ additional talk moves
• When you hear “GIVE ONE” find someone to share your idea and GET ONE from your partner.
• When you hear “MOVE ON” find another partner and GIVE ONE – GET ONE again
Triad Protocol

- Form a trio
- Identify Partner A, B, C
Triad Protocol

- **Partner A is Presenter:** Initially responds to the prompt
- **Partner B is Discussant:** Responds to Partner A with comment, question, example, or detail.
- **Partner C is Observer:** Listen, say nothing, and take notes. After A and B have talked, C summarizes what they’ve said.

**Round 1**

I used to think ______, and now I think ________.
Triad Protocol

- **Partner B is Presenter:** Initially responds to the prompt
- **Partner C is Discussant:** Responds to Partner B with comment, question, example, or detail.
- **Partner A is Observer:** Listen, say nothing, and take notes. After B and C have talked, A summarizes what they’ve said.

**Round 2**

What connections are you making to listening and quality conversations?
Triad Protocol

- **Partner C is Presenter:** Initially responds to the prompt
- **Partner A is Discussant:** Responds to Partner C with comment, question, example, or detail.
- **Partner B is Observer:** Listen, say nothing, and take notes. After A and C have talked, B summarizes what they’ve said.

**Round 3**

How can you apply your learning from today to support math talk?
Learning Intentions

1. Identify
   - Identify where listening is evident in the math competencies

2. Make
   - Make connections between effective listening skills and quality conversations

3. Explore
   - Explore student talk protocols that emphasize listening
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Resources from this session can be found at tinyurl.com/BCmathtalk