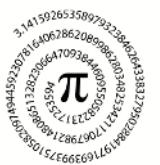# Talk. Think. Solve: Math Strategies That Build Language Along the Way

Practical approaches for integrating language development into middle school math instruction.

Use Sentence Frames to Scaffold Math Reasoning

Content Example: Problem-solving discussion around proportions.
Sentence Frames:

- The ratio is equivalent because ___ and ___.
- I multiplied ___ by ___ to find ___.
- If I scale the denominator, I must also ___.
  - ✓ Supports academic precision
  - ✓ Builds confidence using math language
  - ✓ Easy to embed in lesson routines

Integrate Collaborative Talk Structures During Math Tasks

Content Example: Peer discussion during a multi-step word problem involving percent increase.
Sentence Frames:

- I think the first step is ___ because ___.
- Let's reread the question and underline the part that tells us ___.
- What operation do we need, and how do you know?
  - ✓ Encourages purposeful peer talk
  - ✓ Builds oral fluency and mathematical reasoning
  - ✓ Supports all learners, especially MLs

Pre-teach Key Math Vocabulary Using Visuals and Context

Classroom Context: Introduce vocabulary term during a unit on one-step inequalities.
Visual/Context: Show a simple balance scale image with unequal weights.

- Example Sentence:
  "This scale shows an inequality because the two sides are not the same."
  Anchor Chart Support:
- Term: Inequality
- Definition: A math statement showing that two amounts are not equal.
  Visual: Balance scale. Sentence: Three is less than five. That's an inequality.
  - ✓ Deepens conceptual understanding
  - ✓ Reinforces transfer across problems
  - ✓ Helps multilingual learners connect meaning to language

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