

Really Good Stuff® Activity Guide

Math Talk Sentence Stems Display

This Really Good Stuff® product includes:

- 2 Math Talk Sentence Stems Posters, laminated
- This Really Good Stuff® Activity Guide

Congratulations on your purchase of this Really Good Stuff® **Math Talk Sentence Stems Display**—a color-organized collection of sentence starters to encourage and facilitate meaningful math talk among students.

Meeting the Standards

The Really Good Stuff® **Math Talk Sentence Stems Display** aligns with the Common Core State Standards for English Language Arts and Mathematics below. For alignment with other state standards, please refer to our Web site's Standards Match.

English Language Arts

Comprehension and Collaboration

CCRA.SL.1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

Mathematics

Mathematical Practices

3. Construct viable arguments and critique the reasoning of others.

Preparing the Math Talk Sentence Stems Display

Before introducing the **Math Talk Sentence Stems Display**, make copies of this Really Good Stuff® Activity Guide, and file the pages for future use. Or, download another copy of it from our Web site at www.reallygoodstuff.com. Carefully separate the *Sentence Stems* along the perforations, and display the nine *Sentence Stems* where students can easily see and interact with them. Create the following anchor chart (color coding each bullet point to match the *Sentence Stem*) for future reference:

We can use the **Math Sentence Stems** to . . .

- agree if you have the same answer or thought.
- disagree if you have a different answer or strategy.
- clarify if you don't or understand need more information.
- add on if we want to say more about something.
- explain if we want to share something.

Introducing the Math Talk Sentence Stems Display

Remind students that talking about math problems helps them think more deeply about their work. Hold up the *Sentence Stems*, and explain that they are tools for starting a sentence while they share their thinking during a math talk. Show students that each color represents a different type of communication. Indicate that they are to use the *Sentence Stems* to *agree*, *disagree*, *clarify*, *add on*, or *explain*. Read each colored group of *Sentence Stems*, and ask students to define each group of math thinking and identify when they might use it.

Display a math problem showing your work. Model using one of the *Sentence Stems* to respond to your solution. Challenge students to use additional *Sentence Stems* to talk about the math solution and your work.

Using the Math Talk Sentence Stems

Give students a math problem to solve independently, requiring them to show their thinking with numbers, words, or pictures. (**Note:** Problems with multiple solutions or strategies to solve will generate the most discussion.) Have each student display his or her work, and explain his or her thinking to the class. Encourage listening students to use as many of the *Sentence Stems* as they can to respond to each presenter's work. Remind students that everyone should be listening to help build a strong Math Talk.

Variation: Divide students into groups. Give each group a different problem based on their strengths and needs. Have each student solve the problem independently. Instruct one student to share his or her solution and his or her work with the group. Urge each of the students to respond with one of the *Sentence Stems* and to share his or her work if appropriate. Continue until each student has an opportunity to share his or her work and to contribute to the group discussion at least once.

Thinking about Thinking

After using the *Sentence Stems*, engage students in a discussion about how the *Sentence Stems* have supported their mathematical thinking. Possible discussion questions might include:

- What do you like about the *Math Talk Sentence Stems*?
- Which type of thinking did you use the most in this Math Talk?
- How did _____ help clarify the thinking of the presenter?
- How did _____ help clarify your thinking as the listener?
- Which type of thinking did you use the least in this Math Talk? Why do you think you used it the least?

Getting Ready for Math Talk

Copy and distribute the *Getting Ready for Math Talk Reproducible*. Explain that they are to use this tool to organize their thoughts before a Math Talk. Show students that the paper can be folded in half along the dotted line to make one side for the presenter and one side for his or her listeners. After all students have solved a problem, instruct them to complete the presenter side with an emphasis on how they will explain the thinking to the listeners. Choose one student to share his or her solution and explanation with the class or group. After listening to the presenter share his or her thinking, ask the listening students to complete the Listener side. Have listening students share their thinking in a Math Talk.

Variation: Copy the *Getting Ready for Math Talk Reproducible* onto the back of a sheet with a few math problems and their solutions, showing the work for each. Have students react, and collect the completed paper as an exit ticket to assess student thinking and mastery.

Sorting the Math Talk Sentence Stems

Without showing students the color of the *Sentence Stems*, read each sentence aloud, and ask students to determine which way of thinking, response, or need it matches. Continue until you have sorted all of the *Sentence Stems*. Encourage students to develop other sentence stems.

All activity guides can be found online.

Listener: _____

Listen or look carefully at your classmate's solution. Use this sheet to get ready for your Math Talk. Circle a sentence stem, and then write the rest of the sentence. How many types of thinking can you use in your Math Talk?

I listened to _____. I have these ideas for my Math Talk.	
To agree: I agree with _____ because ... My strategy is like yours because ... That answer makes sense because ...	To disagree: I have a different idea because ... I thought about it in a different way ... My strategy is different. Here's how ...
To clarify: I have a question about ... I want to understand this better ... Can you explain how ... Can you explain why ...	To add on: To piggy-back on what _____ said ... I would like to add onto ... Another strategy we could use is ... What I noticed about your strategy ...
After my Math Talk, I am thinking ...	

After sharing: To explain: I discovered that ... I know that the answer is reasonable because ... The strategy I used was ...

Presenter: _____

Before sharing your solution with your classmates, circle at least one sentence stem, and write the rest of the sentence.
After discussing your solution, circle at least one sentence stem, and write the rest of the sentence.

Before sharing:
To explain:

I discovered that ...
I know that the answer is reasonable because ...
The strategy I used was ...