

What Is the Try–Discuss–Connect Instructional Framework?

Try–Discuss–Connect is a framework that helps engage students in talking about mathematics.

- Use primarily on Develop session days
- Integrates effective teaching strategies to meet the needs of all learners
- Gives students time to process ideas so they are prepared for the classroom conversation

Each step of Try–Discuss–Connect has a specific purpose in supporting learning and discourse.

Try–Discuss–Connect Framework



Try

Make sense of the problem.

Solve and support your thinking.

Student Processing Time

Prepares students to participate in the classroom conversation



Discuss

Share your thinking with a partner.

Compare strategies.

Teacher-Facilitated Student Discourse

Engages students in doing most of the thinking and talking to better retain what they learn



Connect

Make connections and reflect on what you have learned.

Apply your thinking to new problems.

Practice

Reinforces understanding

Try–Discuss–Connect Reflection Form



Try It

Rich tasks provide multiple entry points and hands-on learning to engage individual students' preconceptions and build on prior knowledge. Students solve the problem on their own using the strategies and tools of their choice.

Make Sense of the Problem

What Happens in the Classroom

- ☐ Teachers use one of four language routines to focus students on the important pieces of information in the problem and how they relate.
- ☐ Teachers use moves such as Turn and Talk and rephrasing to engage all students and highlight key ideas.
- ☐ Students actively engage in Individual Think Time and discussion to Make Sense of the Problem.

Routines to Make Sense of the Problem

- ☐ **THREE READS:** The problem is read three times. After each read, students respond to one of these questions: What is the problem about? What are we trying to find out? What is the important information?
- ☐ **CO-CRAFT QUESTIONS:** Teachers present the problem situation without the question. Students identify the important quantities and then craft their own questions about the situation (Grades 1–8).
- ☐ **NOTICE AND WONDER:** Teachers present the problem, situation, or image without the question. Teachers record students' responses to the question, "What do you notice?" without comment. The class follows the same process with the question, "What do you wonder?" Teachers share the full problem and set students to work. At a later time, students might go back to find answers to the questions they wondered about.
- ☐ **SAY IT ANOTHER WAY:** The problem is read aloud, and teachers call on one or more students to explain the problem in their own words. Listeners decide whether the explanations are complete and accurate and revise or add to the explanations as needed.

Notes

Solve and Support Your Thinking

Teacher Look Fors

- ☐ Provides "just right" Individual Think Time for students to solve
- ☐ Provides access to a variety of tools and manipulatives to represent the problem situation
- ☐ Walks around to see representations students are using
- ☐ Promotes productive struggle by resisting temptation to explain or show students how to approach the problem and instead asks questions to help students begin to think about possible solution pathways

Student Look Fors

- ☐ Uses whatever method or approach they choose to represent the problem situation
- ☐ Has access to a variety of manipulatives and tools to support solving
- ☐ Attempts to solve using more than one strategy, showing concrete or visual representations, equations, and/or models

Notes

⚠ Watch Out For:

- Overscaffolded supports provided to students, such as encouraging use of certain strategies or interpreting the problem for them
- Modeling or solving the problem for students, which reduces their capacity to try and think
- Providing too little or too much think time
- Providing hints or showing students how to solve if they get stuck

Try–Discuss–Connect Reflection Form



Discuss It

Students turn and talk to a partner and discuss strategies.

Student work is strategically shared during a class discussion to build conceptual understanding.

Share Your Thinking with a Partner

Teacher Look Fors

- ☐ Displays Discuss It questions and sentence starters in the Student Worktext to support partner conversations; may also use Discourse Cards or Cubes to promote and maintain discussion
- ☐ Establishes structure for sharing (e.g., A/B partners) and designates who shares first, promoting student ownership of discourse
- ☐ Walks around listening to student conversations and selects and sequences strategies to discuss as a class
- ☐ Gathers formative assessment information from all students by observing their thinking and explanations

Student Look Fors

- ☐ Explains their own thinking and asks questions of partner's thinking
- ☐ Respectfully critiques each other's reasoning and looks for connections

Notes

Compare and Connect Strategies

Teacher Look Fors

- ☐ May record students' explanations to encourage attention to precision and accuracy and use as a reference for comparing to other shared strategies
- ☐ Frequently asks all students to repeat, rephrase, or add on to other students' explanations
- ☐ Probes students to make connections between shared strategies
- ☐ Asks students to use established norms and hand signals to show agreement or disagreement with students' thinking and explanations, gaining formative assessment information

Student Look Fors

- ☐ Actively analyzes representations selected for whole class discussion to develop understanding of strategy
- ☐ Considers privately and publicly how representations are the same, different, and related
- ☐ Reviews and interprets representations in the Student Worktext, particularly if none arose from the class
- ☐ In partnerships, discusses connections between strategies in the Student Worktext, their own strategies, and the strategies discussed as a class

Notes

Watch Out For:

- Students who are unsure who should talk first, suggesting unclear discussion expectations and structures
- One partner taking over the conversations
- Teacher repeating or rephrasing ideas for students
- Only selecting correct strategies—It is important that misconceptions are discussed as needed to provide clarity and emphasize the value of mistakes as learning opportunities.
- Students not engaged during discussion of strategies—The teacher should consider ways to engage all students in conversations to ensure understanding of key selected ideas.

Try–Discuss–Connect Reflection Form



Connect It

Students make connections between the strategies discussed and those in the book to reinforce and extend their understanding.

Make Connections and Explain Your Thinking

Teacher Look Fors

- ☐ Uses the Connect It questions to continue the whole class discussion supporting students in presenting logical arguments
- ☐ Allows students to Talk About It orally or in writing to focus on connecting the quantitative, concrete/representational approaches to more abstract understanding
- ☐ Engages students in Show What You Know individually or in pairs to summarize key concepts to prepare for whole class discussion

Student Look Fors

- ☐ Participates in discussions, presenting logical arguments
- ☐ Responds, orally or in writing, to connect concrete approaches to more abstract understanding
- ☐ Works independently or in pairs to summarize key concepts
- ☐ Uses a variety of math tools to support their reasoning

Notes

Apply Your Thinking to a New Problem

Teacher Look Fors

- ☐ Guides students to apply what they have learned to new problems in Apply It using a variety of strategies and tools to support their reasoning
- ☐ Provides access to and encourages use of various mathematical tools and manipulatives
- ☐ May provide time to explain thinking to a partner using discourse strategies, sentence starters, and questions from Discourse Cards
- ☐ Circulates to assess students' understanding and provide differentiated support
- ☐ Gathers formative assessment data to inform upcoming whole class and differentiated instruction
- ☐ May work with small groups of students on Hands-On or Visual Activities as needed to provide equity and promote student autonomy

Student Look Fors

- ☐ Applies thinking and strategies to new problems
- ☐ Uses strategies appropriate to the problem and to support their thinking using pictures, diagrams, or mathematical representations
- ☐ Exhibits agency over learning needs by joining a teacher-led activity, working with a partner, or working individually

Notes

Watch Out For:

- Using the Connect It questions like a traditional workbook, not as a continuation of classroom conversation
- Teachers who jump in to help students right away on the Apply It questions