

Puzzle Talk - Grade 2

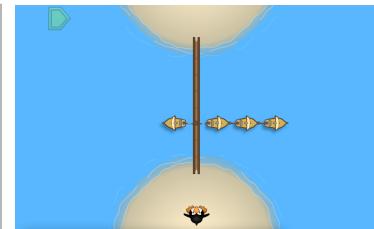
Tugboat (Level 1)



ST Math
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These facilitation suggestions are what a student-led discussion might look like when looking at puzzles in Level 1. Depending on how students respond, it likely would take one session for Level 1.

- **Puzzle Location:** Grade 2 > Even and Odd Numbers > Tug Boat > Level 1
- **Topic:** Addition, subtraction, and equal amounts
- **Purpose of the Puzzle Talk:** Focus on student thinking and developing problem solving skills using guiding questions for each step in the Problem Solving Process
- **Preparation:** View the [Game in a Minute](#) video
- **Gather Materials:** Provide students with a whiteboard and a dry-erase marker with an eraser



[click here for puzzle](#)

Description

Notice and Wonder

- Display the first puzzle from Level 1.
- Ask students, "What do you notice? What do you wonder about this puzzle?"
- Allow a few students to share their thinking with the whole class.

Predict and Justify

- Ask students to think individually about how they could solve the puzzle, then turn and share with a partner before sharing as a class.
- Students should provide mathematical reasoning for the idea they want to try. They can use their math tools and whiteboard to demonstrate their thinking.
- As students share their strategies, list these ideas for the class to consider.

Test and Observe

- Select one of their solutions to try.
- Solve the puzzle and have students describe what happened.
- Use the animation controls by double-clicking on the screen to pause the puzzle while students check if their answer matches the puzzle displayed. Discuss how the feedback might provide evidence as a solution that will work or not work.

Analyze and Learn

- Ask students to think about how what they saw happen compares to their prediction.
- Discuss what happened in the feedback. Ask students questions such as these:
 - "What happened after we arranged the tugboats?"
 - "How many tugboats are on the left and right of the bridge?"
 - If the bridge didn't open,
 - "Why do you think the bridge didn't open and was pulled away?"
 - "What do you think we could have done differently?"
 - If the bridge opened,
 - "Why did the bridge open?"
 - "What did we need to do to make the bridge open?"
 - "How do we need to arrange the tugboat to open the bridge? How many tugboats need to be on each side? How do you know?"
- Have one student share their idea and test this solution.
- Repeat with additional puzzles in Level 1.