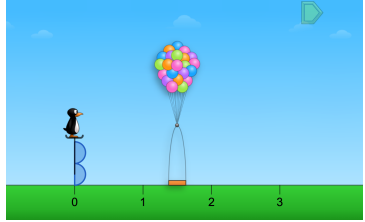


Puzzle Talk - Grade 4

Jiji Cycle Select Basket (Level 1)



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.

Description	<ul style="list-style-type: none"> • Puzzle Location: Grade 4 > Addition and Subtraction with Fractions > Jiji Cycle Select Basket > Level 1 • Topic: Adding and subtracting fractions • 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 fraction manipulatives, 0-5 Number Line Math Mat, whiteboards, and dry-erase markers 	 <p>click here for puzzle</p>
Notice and Wonder	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 fraction manipulatives and whiteboard to represent the puzzle. Ask questions such as: <ul style="list-style-type: none"> ◦ "What quantity is represented?" ◦ "How can we represent this quantity using circles?" ◦ "How can we represent this quantity using a number line?" 	
Test and Observe	<ul style="list-style-type: none"> • Select one of the students' strategies. • Solve the puzzle and have students describe what happened. • Have students model the puzzle on the 0-5 Number Line Math Mat. 	
Analyze and Learn	<ul style="list-style-type: none"> • Ask students to think about how what they saw happen compares to their prediction. <ul style="list-style-type: none"> ◦ If the answer was incorrect, discuss what was learned from the feedback and what they think is best to try next. Have students discuss why that is the best way to solve the puzzle. Try another way to solve it. ◦ If the answer was correct, how can they take what they learned and then apply it to the next puzzle? • Show the next puzzle and have students discuss their strategies for solving it and why. • Select a student's strategy to try and observe the feedback. • Replay the puzzle, pause the puzzle before Jiji crosses the screen, and ask questions like: <ul style="list-style-type: none"> ◦ "What happened as the Jiji cycle moved along the number line?" ◦ "How could we represent this using repeated addition?" ◦ Rewind and count the unit fractions as the Jiji cycle moves along (e.g., "one one-third, two one-thirds, three one-thirds"). • Students can count the unit fractions as the Jiji cycle moves along the number line. • Have students use the fraction manipulatives and the number line to represent what is happening in the puzzle. • Repeat with additional puzzles in Level 1. 	