Puzzle Talk - Grade 5

Pie Monster (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	• • •	 Puzzle Location: Grade 5 > Common Denominators and Equivalent Fractions > Pie Monster > Level 1 Topic: Adding fractions with a common denominator 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, whiteboards, and dry-erase markers 	Click here for puzzle
	Notice and Wonder	 Display the first puzzle from Level 1. Ask: "What do you notice about this puzzle? What do you wonder about this puzzle?" Allow students to share out. 	
	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 build representations of the puzzle with their fraction manipulatives. As students share their strategies, list these ideas for the class to consider. 	
	Test and Observe	 Select one of the students' strategies. Solve the puzzle and have students describe what happened. 	
	 Ask students to think about how what they saw happen compares to their prediction. If the answer was incorrect, discuss what was learned and what they think is best to try next. Have students share why that is the best way to solve the puzzle. If the answer was correct, how can they take what they learned and apply it to the next puzzle? Show the next puzzle and have students think about how they would solve the puzzle and why. Have students model the puzzle and their solution on their game mat. Ask students questions such as: "How could we represent what is happening in this puzzle with an equation? Write the equation on your game mat." Discuss the equations students create. "How did you determine the denominator to represent what the pie monster wants to eat as a fraction?" Thow did you determine the denominator for the pies on the conveyor belt?" Discuss students' strategies. (Did they use the visual model? Did they find a common denominator? If so, how did they find an equivalent fraction with the same denominator? Did they write a mixed number or fraction?) Select a student's strategy to try and observe the feedback. Use the animation controls to pause the puzzle while students check if their answer matches the puzzle. Discuss how this might provide evidence for why the solution will or will not work. Repeat with additional puzzles in Level 1. 		