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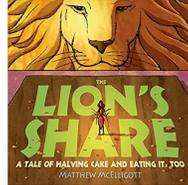LEARNING
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Slices of Cake

Task

How much cake did each guest get to eat?

Standards and Learning Targets

Standard 5.NF.4 Apply and extend previous understandings of multiplication to multiply a fraction or whole number by a fraction.

    a. Interpret the product (a/b) x q as a parts of a partition of q into b equal parts; equivalently, as the result of a sequence of operations a x q ÷ b using a visual fraction model. For example, use a fraction model to show (2/3) x 4 = 8/3, and create a story context for this equation. Do the same with (2/3) x (4/5) = 8/15. (In general, (a/b) x (c/d) = ac/bd.)

Learning Target: Multiply a fraction by a fraction

Lesson Outline

Anticipate Strategies: Before you begin this lesson, be sure to anticipate the strategies your students might use to figure out how much cake each animal gets using the Picture Book Problem Monitoring Chart. Most students will likely use a sheet of paper to represent the whole and then split it in half, then the half into fourth etc. Some students will not need the paper after the first few animals as they will begin to see the pattern.

Launch: Read aloud The Lion's Share by Matthew McElligott. As you approach the part where the ant gets the last part of the cake, ask the students, how much cake did each guest get to eat? Give students a sheet of plain paper or a dry-w grid to use as they solve the problem. Remember there was Elephant, hippo, gorilla, tortoise, warthog, macaw, frog, and ant.

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Use numbers or pictures to explain your thinking. Slices of Cake Recording Sheet
Explore: Students use a plain sheet of paper or grid paper to determine the amount of cake each animal gets.
Summarize: Discuss how students found the amount of cake each animal got. Write the number sentences on the board for each animal. For example, the hippo got ½ x ½ = ¼. Once all of the number sentences are on the board, ask students what they notice about the number sentence and what happens when we multiply two fractions (the product is smaller than the factors).
Extension Ideas: What if the elephant cut the cake into thirds or fourths?

Thank you for using one of our Picture Book Tasks! We would love to know more about your students' strategies when solving the problem, ideas you had for improving the task, and other math problems you and your students noticed or wondered about after reading the book.

Please complete our Picture Book Task Survey so that we can learn more about your experience teaching, how students solve problems, and improve our Picture Book Task Bank.