Performance-Based Task

Name of Task: **I Ate the Whole Bag**	**Grade Level: 4 & 5**
BEGIN WITH THE END IN MIND: What will we learn about the students' mathematical understanding from this task? Student will learn to find fractional parts. Students will multiply and divide decimals.	
Common Core Content Standards assessed through this task: (choose 3-5 standards at your grade level that can be clearly assessed through this task. Standards need not be from the same domain but should relate to the task). 5.NF.1 Use equivalent fractions as a strategy to add and subtract fractions. 5.NBT.5 Perform operations with multi-digit whole numbers and with decimals to hundredths.	**Standards for Mathematical Practice assessed through this task:** (choose 2-3 Standards for Mathematical Practice that can be clearly assessed through this task.) 1, 3, 8

Performance-Based Task

Use the space below to outline your task. Keep the following in mind…

I love cookies. Last week I purchased a large bag of sugar cookies. They were great! On Monday, I ate ½ of the bag. On Tuesday, I ate ¼ of the original bag. On Wednesday, I ate $\frac{1}{8}$ of the original bag. I realized Thursday there were only 5 cookies left in the bag. I can't believe I ate the whole bag in only 4 days! The bag is gone! How many cookies did I eat each day?

Expansion: My bag of cookies cost $4.49. How much did I spend each day on my cookies? At this rate, how much do I spend a year on cookies if I eat a bag every 4 days?

Does this task...

- reflect a real-world task/scenario-based problem?
- require application of mathematical concepts and assess related Common Core content Standards?
- Require students to engage in 2-3 Standards for Mathematical Practice?
- Allow for multiple approaches?
- Require a high level of cognitive demand?

Assessment: How will you evaluate student work? Create a task-specific rubric. Apply the Exemplars levels– Novice, Apprentice, Practitioner, Expert – when creating your rubric.

Novice	There is no solution or solution has no relation to the task. No evident of strategy or procedure, or uses a strategy that does not help solves the problem. There are no use or inappropriate use of mathematical representations (ex- figures, diagrams, graphs, tables etc...)
Apprentice	The solution is not complete indicating that parts of the problem are not understood. Some evidence of mathematical reasoning. There is an incomplete explanation; it may not be clearly presented.
Practitioner	The solution shows that the student has a broad understanding of the problems and the major concepts necessary for its solutions. Uses a strategy that leads to a correct solution for the problem. There is a clear communication of the explanation.
Expert	The solution shows a deep understanding of the problem including the ability to identify the appropriate mathematical concepts and the information necessary for its solution. Uses a very efficient and

	sophisticated strategy leading directly to the solution. There is precise and appropriate use of mathematical terminology and notation.

NCTM Process Standards and the CCSS Mathematical Practices

NCTM Process Standards	CCSS Standards for Mathematical Practice
Problem Solving	1. Make sense of problems and persevere in solving them. 5. Use appropriate tools strategically.
Reasoning and Proof	2. Reason abstractly and quantitatively. 3. Critique the reasoning of others. 8. Look for and express regularity in repeated reasoning
Communication	3. Construct viable arguments
Connections	6. Attend to precision. 7. Look for and make use of structure
Representations	4. Model with mathematics.