

Performance-Based Task

Name of Task:
Quilts for Troops

Grade Level: 5

BEGIN WITH THE END IN MIND: What will we learn about the students' mathematical understanding from this task?

Student will add, subtract and multiply decimals. Students will gain a hands-on understanding of area for various polygons.

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..G.4 Classifying two-dimensional figures
5.NBT.7 Perform operations with multi-digit whole numbers and with decimals to the hundredths.

Standards for Mathematical Practice assessed through this task: (choose 2-3 Standards for Mathematical Practice that can be clearly assessed through this task.)

4. Model with mathematics.
5. Use appropriate tools strategically.
7. Look for and make use of structure.

Performance-Based Task

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

Your class has decided to make quilts for troops in Afghanistan this winter. Use pattern blocks to design a quilt using triangles, squares, rectangles, trapezoids, and rhombuses. At least two of each shape must be used.

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	No strategy is chosen or a strategy is chosen that will not lead to a solution. Little or no evidence of engagement in the task. No correct reasoning nor justification for reasoning is present. Little or no communication of an approach is evident with mathematical language. No connections are made. No attempt is made to construct mathematical representations.
Apprentice	A partially correct strategy is chosen. Evidence of previous knowledge. Arguments are made with some mathematical basis. Some formal math language is used, and examples are provided

Performance-Based Task

	<p>to communicate ideas. Some effort is made to relate to own interests and experiences. An attempt is made to construct mathematical representations to record and communicate problem solving.</p>
Practitioner	<p>A correct strategy is chosen. Evidence of applying prior knowledge is present. Arguments are constructed with adequate mathematical knowledge. Systematic approach or correct reasoning is present. Precise math language is used with audience in mind. Mathematical connections are recognized. Appropriate mathematical presentations are used.</p>
Expert	<p>An efficient strategy is used. A correct answer is given. Evidence is used to justify and support decisions. Precise math language is used to communicate to an appropriate audience. Mathematical connections or observations are used to extend the solution. Abstract or symbolic mathematical representations are constructed to analyze relationships, extend thinking and clarify or interpret phenomenon.</p>

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.