



Gold Seal:

Copernicus Education Gateway

Author(s): Janet Peregoy			Lesson Title: The Fire Marshall Dilemma			
Grade Span			ICLE Application Model			
K-4	5-8 X	9-12	A	B	C	D X

Instructional Focus:

Measurement

Students use a variety of tools and techniques of measurement in a problem-solving situation. Students communicate the reasoning used in solving these problems.

Geometry

Students apply geometric concepts, properties, and relationships in a problem-solving situation. Students communicate the reasoning used in solving these problems.

Problem-Solving and Mathematical Reasoning

Students apply a variety of problem-solving strategies to investigate and solve problems from across the curriculum as well as from practical applications.

Writing

Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.

Performance Task

The school has received notification from the fire marshal that no more than 25% of the wall space in any classroom in your school may be covered with paper. Is your classroom in compliance with this regulation? If not, what must we do to come into compliance?

Prepare a document to present to the fire marshal to prove that our classroom meets the regulations, and support all your statements with calculations. Use drawings wherever appropriate.

ICLE Essential Skills

Operations with signed numbers including decimals, ratios, percents, and fractions. (m 1)

Compute perimeter and area of two-dimensional figures. (m 13)

Use the technique of dimensional analysis to convert units of measure (e.g., convert km/hr to m/min) including drawing to scale and applying ratios. Understand and use various techniques for estimating, making and converting measure; and using these to perform dimensional analysis. (m33)

Present information in well-organized fashion that will be clear to the target audience. (ela11)

Scoring Guide:

Criteria	4	3	2	1
Independence	The student independently completes the problem.	The student requires some help in completing the problem.	The student requires considerable help in completing the problem.	Even with help, the student does not complete the problem.
Problem Solving	The student's work shows a thorough, methodical plan, for solving the problem.	The student's work shows an adequate plan for solving the problem.	The student's work shows a plan for solving the problem.	The student's work shows that there was no real plan for solving the problem.
Accuracy of Solution	The solution is completely accurate.	There are some minor inaccuracies.	There are many inaccuracies.	The solution is completely inaccurate.
Communication	The solution to the problem is communicated in a clear and appropriate manner.	The solution to the problem is communicated in a somewhat clear and appropriate manner.	The solution is communicated in a confusing manner.	The solution is not communicated.

Keywords

English Language Arts	Mathematics	Science
Reading	Algebra Computation Measurement	Earth Science
Writing Expository	Geometry Area Geometry in Daily Life Problem Solving	Life Science
Communications	Statistics	Chemistry
Literature	Calculus	Physics
Other	Trigonometry	Other
	Other	