



Gold Seal Lesson

Author(s): <i>Marsha Kucker</i>			Lesson Title: <i>I'll Blow Your House Down</i>			
Grade Span			ICLE Application Model			
K-4 X	5-8	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.

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

Reading –

Students read a variety of grade level materials, applying strategies appropriate to various situations.

Listening –

Students listen for a variety of purposes appropriate to the grade level.

Writing

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

Language Arts Integration

Students synthesize individual language arts skills.

Tools and Technology –

Students use appropriate tools and technologies to model, measure, and apply the results in a problem-solving situation. Students communicate the reasoning used in solving these problems.

Performance Task

1. Have the students take turns reading aloud and role playing the story of “The Three Little Pigs.”
2. Explain that today, they will be building a model house for the three little pigs. Each house will consist of three rooms, one for each of the three little pigs. The students will work in 3 person teams. Each person on the team will make one of the rooms of the house. Each person is to measure and cut out the floor, the four walls, and the ceiling of his/her room. They will be cut from construction paper or tag board, whichever you have available. They will tape the 6 pieces together to form the room which will be in the shape of a rectangular prism (a box shaped figure). When all three students finish making their rooms, they will glue or tape the rooms together to form the house. All the rooms will have the same height. The students will have to measure, cut, and tape their rooms together very carefully or the three rooms may not fit nicely together.

Performance Task continued:

3. The dimensions for the three rooms of the model house are as follows.

	<u>Length</u>	<u>Width</u>	<u>Height</u>
Room 1	12"	15"	8"
Room 2	9"	12"	8"
Room 3	15"	10"	8"

4. Divide the class into teams of 3 children each and let them begin their construction.

5. The children may want to cut windows and doors in their rooms. They may also want to do some decorating.

6. If you wish, you might have several teams put their houses together on a large piece of plywood to form a little community. This will give you the opportunity to discuss "community," a social studies concept in elementary school.

7. Extend the project to include other concepts in your curriculum.

8. Conclude by having the students write a story in their journal entitled "What Math Is Involved In Building A House?"

ICLE Essential Skills

Follow oral or written directions. (ela4)

Identify, collect and/or select pertinent information while reading. (ela5)

Use brainstorming, role playing, and standard problem solving strategies to define a problem and suggest solutions. (ela19)

Participate, sometimes leading, in group meetings by contributing, taking turns speaking, and working toward a common goal. (ela20)

Gather information such as data, facts, ideas, concepts, and generalizations from oral sources. (ela51)

Interpret texts by reading orally with appropriate expression. (ela86)

Use the technique of dimensional analysis to convert units of measure 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.

Use direct proof and indirect proof sequencing techniques to reach a conclusion. Direct proof uses the Laws of Reasoning to create an orderly arrangement of steps leading to a conclusion. Indirect proof causes an initial assumption that the conclusion is false, and through a series of logically sound reasoning steps the statement may be proved otherwise. (m32)

Apply transformation concepts to understand and create congruent and similar figures. (m49)

Plan and apply real or hypothetical models and constructions to facilitate investigation and learning and the solution to practical problems. (science115)

Scoring Guide:

See attachment: I'll Blow Your House Down Scoring Rubric.

Keywords

English Language Arts	Mathematics	Science
Reading Booktalks Fluency Construction Meaning	Algebra Manipulatives Problem solving	Earth Science
Writing Expository Grammar Journals Mechanics Organization	Geometry Congruence Geometry in daily life Logic Polygons Relationships Two-dimensional objects Three-dimensional objects Manipulatives	Life Science
Communications Discussion Listening Visuals Choral reading Role play	Statistics Measurement	Chemistry
Literature	Calculus	Physics Scientific process
Other	Trigonometry	Other
	Other	

Chart

Expectations	Exceeds	Meets	Approaches	Needs More Work
Follows Direction				
Offers Ideas				
Takes Turns				
Listens to Others				
Respects Other Opinions				
Shares Materials				
Completes Task On Time				
Measures accurately				
Constructs Rooms and House				
Writes story identifying math needed to complete project				