Gold Seal Lesson:

Copernicus Education Gateway

Author(s): Janet Peregoy			***Lesson Title: "Can" You Pack It?***			
Grade Span			***ICLE Application Model***			
K-4	***5-8***	***9-12*** ***XX***	***A***	***B***	***C***	***D*** ***XX***

Instructional Focus:

Geometry—apply geometric concepts in a problem-solving situation

Measurement—Use a variety of tools and techniques of measurement in a problem-solving situation.

Problem-Solving—apply a variety of problem-solving strategies.

Performance Task

You work in the packing department at a company that makes canned soup. The company has asked you to design packaging that will hold 48 dozen cans of tomato soup (net weight 10 ¾ oz – the size of a Campbell's® soup can). The board of directors wants you to design several different packing boxes and make a recommendation at the next board meeting about which container would be best. Be sure to address all real-world advantages and disadvantages, including, but not limited to, the amount of material required to make the package, and the practicality of the container for shipping. For the package you recommend, create a scale drawing of the front, top, and side perspectives, and build a proportional, three-dimensional model to use during your presentation.

ICLE Essential Skills

Compute the volume of three-dimensional figures (solids). (m 17)

Speaking: Prepare and deliver individual speeches by gathering information, rehearsing, making eye contact, speaking loudly enough, delivering information in a well-organized fashion, and appealing to the needs of the target audience. (ela 10)

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. Real-world considerations are completely addressed.	There are some minor inaccuracies. Some attention is given to real-world considerations.	There are many inaccuracies. The theoretical solution has many real-world problems.	The solution is completely inaccurate, and does not work in real-world application.
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**	**Earth Science**
Writing	**Geometry** Geometry in Daily Life Three-Dimensional Objects Surface Area Volume	**Life Science**
Communications Oral Presentation	**Statistics**	**Chemistry**
Literature	**Calculus**	**Physics**
Other	**Trigonometry**	**Other**
	Other	