



Gold Seal Lesson

Author(s): Marsha Kucker			Lesson Title: Jelly Beans and Fractions			
Grade Span			ICLE Application Model			
K-4	5-8 XX	9-12	A	B	C	D XX

Instructional Focus:

Listening –

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

Speaking –

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

Statistics and Probability –

Students use statistics and probability to analyze given situations and the results of experiments. Students communicate the reasoning used in arriving at a conclusion.

Number Operations and Concepts –

Students use number, number sense, and number relationships in a problem-solving situation. Students communicate the reasoning used in solving these problems.

Algebraic Concepts and Relationships –

Students use algebraic methods to investigate, model, and interpret patterns and functions involving numbers, shapes, data, and graphs in a problem-solving situation. Students evaluate and 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.

Performance Task

This activity is an introductory or review lesson in fractions.

1. Divide the class into groups of two. Give each group 36 jelly beans.
2. Lead the group through the process of counting out fractions of the total. Ask them to count and divide the 36 jelly beans into $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{12}$, $\frac{1}{3}$, $\frac{1}{6}$, $\frac{1}{18}$ portions.
3. Have the groups separate their jelly beans by color. What fraction of the total does each color represent?
4. Ask each group to draw and color a circle graph (pie chart) displaying the information from #3 above.

ICLE Essential Skills

Give oral or written directions that re clear and are understood by another person. (ela 2)

Follow oral or written directions. (ela 4)

Express opinions clearly and forcefully without interrupting or insulting others. (ela 16)

Use brainstorming, role playing, and standard problem solving strategies to define a problem and suggest solutions. (ela 19)

Gather information such as data, facts, ideas, concepts and generalizations from oral sources. (ela 51)

ICLE Essential Skills Continued...

Participate in a one-on-one conference by relating essential information, asking questions on the topic, and using language to clarify information. (ela 69)
Perform operations with signed (positive and negative) numbers, including decimals, ratios, percents, and fractions. (m 1)
Understand basic algebraic properties (i.e., commutative: $ab = ba$; associative: $ab (c) - a (bc)$; and distributive: $a (b+c) = (ab)+(ac)$) (m 3)
Understand the best procedures for statistical data collection, organization, and display including making estimates and predictions and drawing inferences. (m 5)
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. (m 33)
Know how to determine combinations (i.e., the various grouping a set may be arranged in without regard to order). (m 43)

Scoring Guide:

See attachment: Jelly Beans and Fractions Scoring Rubric Chart

Keywords

English Language Arts	Mathematics	Science
Reading	Algebra Algebraic Operations Computation Manipulatives Math in Daily Life Number Theory Problem Solving	Earth Science
Writing	Geometry	Life Science
Communications Discussion Listening Illustration Communication	Statistics Data Display Charts Problem Solving	Chemistry
Literature	Calculus	Physics
Other	Trigonometry	Other
	Other	

Chart

SCORING RUBRIC

3	BEYOND	Analyzed and readily understood the task. Developed an efficient and workable strategy. Showed explicit evidence of carrying out the strategy. Showed mastery of concept of fractions and was able to construct an accurate graph.
2	AT LEVEL	Understood the task. Developed a workable strategy. Some evidence of carrying out the strategy. Showed understanding of the concept of fractions and constructed a graph.
1	NOT YET AT	Partially understood the task. Appropriate strategy some of the time. Possible evidence of a plan – not clear. Partial understanding of the concepts of fractions and constructed a rudimentary graph.
0		Totally misunderstood. Inappropriate, unworkable strategy. No evidence of carrying out a plan. No understanding of the concepts of fractions. Blank graph