

Constructing Task: Zoo Trouble

Approximately 2 Days



STANDARDS FOR MATHEMATICAL CONTENT

MCC.2.G.2 Partition a rectangle into rows and columns of same-size squares to find the total number of them.

STANDARDS FOR MATHEMATICAL PRACTICE

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

*****Mathematical Practices 1 and 6 should be evident in EVERY lesson*****

BACKGROUND KNOWLEDGE

(Information quoted from Van de Walle and Lovin, Teaching Student-Centered Mathematics: Grades K-3, page 84)

“Have students build arrays using square tiles or blocks or by having them draw arrays on centimeter grid paper. Present the exercises by specifying how many squares are to be in the array. You can then specify the number of rows that should be made (partition) or the length of each row (measurement).”

ESSENTIAL QUESTIONS

- What strategies can I use to count the total number of squares in a rectangle?
- How are arrays and repeated addition related?

MATERIALS

- Colored pencils, markers
- Square tiles
- Crayons, colored pencils, markers (optional)

GROUPING

Partners

TASK DESCRIPTION, DEVELOPMENT AND DISCUSSION

MATHEMATICS • GRADE 2 • UNIT 5: Understanding Plane and Solid Figures

Georgia Department of Education

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May 2012 • Page 47 of 71

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Georgia Department of Education
Common Core Georgia Performance Standards Framework
Second Grade Mathematics • Unit 5

Students will be presented with the problem: Annette has a summer job working at the local zoo. One part of her job is to design a new exhibit for the animals. There are a few guidelines that she must follow:

- The shape of the exhibit must be a rectangle
- Within the exhibit she needs to create a pen for each animal
- Each pen must be the same size
- Each pen must have a wall on all four sides

Annette wants to fit the most animals possible in her exhibit. How many equal sized pens can she fit within a rectangle?

Students will be creating a model of the exhibit. The goal of this activity is for them to explore partitioning a rectangle into rows and columns.

FORMATIVE ASSESSMENT QUESTIONS

- How much space do you think each pen should have?
- What patterns are you noticing between the number of columns and rows?

DIFFERENTIATION

Extension

Students can be given limitations on the perimeter of the exhibit.

Intervention

Allow students to use grid paper to create their exhibit.

Name: _____

Zoo Trouble



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Annette wants to fit the most animals possible in her exhibit. How many equal sized pens can she fit within a rectangle? Show your math thinking using words, numbers, and drawings.