

Lesson Plan for KNP Activity

M 4404.5: Solving Bug Word Problems

Teacher Planning Notes:

Task Group Number: 4404

Task Group Name: Buggin' Out - [2,4,6,8]

Strand: Multiplication and Division

Activity Level and Color: 5 Pink

KNP Activity Link with access to Printables and Student Instructions:

</knp/activity.php?id=4404.5&prefix=M>

Numeracy Target: Multiply and divide within 100 using a range of strategies

[Numeracy Targets Chart](#)

Fluency Benchmark: KY.3.OA.7 Fluently multiply and divide within 100.

Kentucky Academic Standard(s): [KY.3.OA.2](#), [KY.3.OA.4](#), [KY.3.OA.6](#)

Student-Friendly Learning Target: I am learning to represent a word problem using different methods to find the product or quotient.

Suggested Student Grouping(s): Small Group 4-5/ independent

Materials: Word Problem Cards: 30 cards in total, 2 sheets; 15 Bee Game Cards & 15 Caterpillar Game Cards; Butterfly Work Mat: one per person

Activity Description: Each student should receive their own work mat. All the word problem cards (bee and caterpillar cards) should be shuffled and placed upside down in the middle of the students. Students will work independently. Each student will draw a word problem and write down the matching equation with the unknown in the indicated area on their work mat. Next the students will represent the equation in a method of their choice. Each student will then record their total on the work mat. Once all the students have finished their work mats, each student will take time to share their work with the group (or their partner). Play will continue for four full rounds

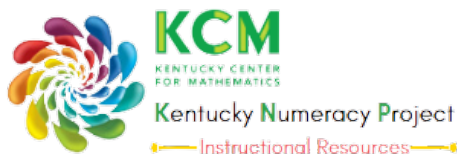
Teacher Notes: This activity challenges students to recognize and apply the commutativity and the inverse properties of multiplication and division to solve word problems with equal groups, arrays and comparing dealing with unknown group size and number of groups. Students are also challenged to show and explain their problem solving process. Students are ready for this activity when they can use multiplicative counting to solve word problems without visible markers for the number of groups or individual items. If student struggles to remember the values of each type of bug game card, set one of each type of bug card face up in front of the student for reference. This activity contains two set of word problem cards based off the common multiplication and division situations. These problem types can be found in the table on page 89 in the Common Core State Standards for Mathematics.

- o 5 Yellow Bee Cards: Equal groups/Group size unknown
- o 5 Red Bee Cards: Arrays/Group size unknown
- o 5 Blue Bee Cards: Compare/Group size unknown
- o 5 Green Caterpillar Cards: Equal groups/Number of groups unknown
- o 5 Blue Caterpillar Cards: Arrays/Number of groups unknown
- o 5 Purple Caterpillar Cards: Compare/Number of groups unknown

Use of lamination or protective sleeves for work mats so use of dry erase markers is possible. Protective sleeves are easier to erase than lamination but do not hold up as long. It is recommended that word problem cards are printed on card stock or heavier paper to prevent wear and tear. If unable to print word problem cards in color, label the each card according to their coordinating colors via marker or a colored dot sticker. Alternative materials: If printing the work mat is not possible, students may create their own work mat on a piece of paper. Be sure to have them follow the same format as the one provided. Created by Jordan Rhude & Emily Westerling, 2015

Evidence of Learning (Diagnostic Assessment of Progress): Student will draw a word problem card, write the equation and solution, and then show and explain their thinking.

KNP ID #M 4404.5



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