

Lesson Plan for KNP Activity

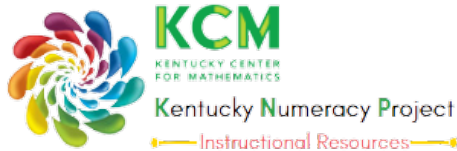
M 4443.3: Partially Screened Arrays Powerpoint

Teacher Planning Notes:	
Task Group Number: 4443	Task Group Name: Multiplication and Arrays PowerPoint
Strand: Multiplication and Division	Activity Level and Color: 3 Green
KNP Activity Link with access to Printables and Student Instructions: /knp/activity.php?id=4443.3&prefix=M	
Numeracy Target: Count items arranged in equal groups with only group markers visible (items with groups are not visible) Numeracy Targets Chart	
Fluency Benchmark: KY.3.OA.7 Fluently multiply and divide within 100.	
Kentucky Academic Standard(s): KY.3.OA.1	
Student-Friendly Learning Target: I am learning to determine how many items in all when items are arranged in an array but the items are hidden. I am also learning write an addition sentence and a multiplication sentence to match the picture.	
Suggested Student Grouping(s):	
Materials: M4443.3 PowerPoint	
Activity Description: Facilitate student discussion about images in the M4443.3 Power Point. Images are of items or dots arranged in an array that is then partially screened. Engage students in talking about the structure of the image, paying particular attention to the groups and the idea of equal groups/rows/columns. Ask students about the total number of items/dots. Look for efficient strategies to count, such as using known doubles or skip counting sequences. Ask students to write corresponding addition and multiplication sentences. Note, arrays are a great setting for bringing out the commutative property of multiplication. For example, if we imagine rotating a 4x5 array, we will see that $4 \times 5 = 5 \times 4$.	

Teacher Notes: Students that know the common skip counting sequences such as by 2, 3 and 5 will likely be more prepared for this activity. Students may reference the dots/items in the top row or left column to help keep track of the groups being counted.

Evidence of Learning (Diagnostic Assessment of Progress): Briefly show a 4 by 6 array. Say "This array has 4 rows and each row has 6 dots." Quickly lay a paper over the array so that only the top 6 dots are visible. Ask student "How many dots are there in all?"

KNP ID #M 4443.3



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