



TEACHER PAGE

Lesson: Arrays with Rikki
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New Arizona Math Strand 1 Number Sense and Operations, Grade 3, 4
Articulated 1M32-07 Demonstrate the process of multiplication as repeatedly adding the same number, counting by multiples, combining equal sets, and making arrays.
1M42-04 Solve word problems using grade level appropriate operations and numbers.

Old Arizona Math Standard 4 Geometry Grade 1-3
4MF1-PO6 Use a rectangular array to represent a multiplication fact.

Learning objectives: Students will be able to:

- Demonstrate the process of multiplication by using an array
- Explain columns and rows in an array
- Explain the number sentence representing an array

Overview and Content:

First, columns and rows are identified as key to understanding multiplication through arrays. There are definitions and examples for students to see. Students learn they can use columns first, or rows, to determine the product and number sentence in this lesson. This lesson uses more complex numbers than Hurray for Arrays and requires a higher level of problem solving and computer skill for success. This performance objective was formerly in the Geometry standard.

Engaging Students:

1) Demonstrate a few arrays on the overhead with colored disks, OR 2) hand out bags of disks, buttons or other small objects for students to explore then arrange at your direction: 2 by 4, 5 X 2 and so forth. Identify the displays as arrays and that students learn them for multiplication.

Follow-up:

- SO WHAT! is a trip to the bank to count coins.
- DIG DEEPER explores the three-dimensional world of arrays
- TALK ABOUT IT! is a terrific challenge for student partners to discuss then draw examples of what to do with an odd number in an array.
- Students draw the planting of rows (and columns) of corn. Determine the number sentence. Going on: students then calculate the array when each stalk of corn grows ten ears. Calculate the total product of stalks in the array and the total product of ears of corn from the stalks. This obviously could keep growing.

Assessment:

Students select the correct number sentence for the array, fill in the correct numbers for a given array and calculate the product of number sentences.

