Area Dice Game

Use with Math with Someone.

Concept	Find the area of a rectilinear figure.
Materials Needed	Each partner pair will need the following: • Blank grid paper • 2 dice • Markers or crayons
Directions	1. Divide grid paper in half. Determine which half each player will use. 2. Partner 1 rolls the dice and says aloud, "I will draw a rectangle with ___ rows of ____," inserting the numbers rolled on the dice. 3. Partner 1 draws a rectangle that corresponds with the numbers just rolled anywhere on his or her half of the blank grid paper. 4. Partner 1 writes the multiplication equation to show the area of that rectangle. For example, if a 3 and a 6 were rolled, the student would draw a rectangle with 3 rows of 6 and write the equation $3 \times 6 = 18$ units^2 inside. 5. Partner 2 repeats the procedure, creating a rectangle on his or her half of the grid paper. 6. Partners continue taking turns and creating rectangles. Rectangles must touch one another. Play continues until one partner is unable to make a rectangle with the remaining space. 7. Partners each add up the total area used. The student with the largest area is the winner.
Differentiate	Differentiate this activity by providing dice numbered at appropriate levels for each student. Struggling students may work with standard 1–6 dice. Students ready for a challenge can use polyhedral dice. Have a student struggling with 4s facts? Have the partners use one die that has only the number 4 on each side. To differentiate instruction for advanced students, have students play to win by creating the figure with the greatest perimeter after 10 rolls. Or, have students find the total area of unused space in their respective half of the grid. The partner with the lowest number is the winner.