

Design a Farmer's Market Display Area

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Grade Level(s): 4th

Description of the Task: Students will design a farmer's market display area using the constraints laid out in the problem.

You are a vendor at the local Sunnyside Farmer's Market. You have 3 display carts in which to lay out the fruits and vegetables you are selling. Each display cart has 3 shelves. Fruits and vegetables take up different amounts of space based on their size. You must display at least one of each type of the different fruits and vegetables in order to give your customers the greatest selection. Try to organize your cart to maximize your profits (amount of money you earn).

4.M.3: Use the four operations (addition, subtraction, multiplication and division) to solve real-world problems involving distances, intervals of time, volumes, masses of objects, and money.

Indiana Mathematics Process Standards: PS.1: Make sense of problems and persevere in solving them.

The students will try different combinations of fruits and vegetables to see which will produce the most profit.

Mathematics Content Goals:The goal of this lesson is to use multiplication, and addition of money in solving real-world equations.

Language Objectives:

Listening- Students will follow directions as the assignment is introduced and key vocabulary is discussed.

Speaking-They will tell someone near them their prediction for which fruits and vegetables will generate the greatest amount of money and explain why they think this is true.

Reading-Using the text of the question they will find specific information which will guide them to explore different possibilities for which fruits and vegetables to put in their cart.

Writing-They will state their reasoning and justify why they chose to put certain fruits and vegetables for sale.

Materials: Calculator(optional), pencil

Before:

- Make sure students know what a Farmer's Market is. Describe my own experiences going to the Farmer's Market.
- Discuss what a profit is.
- Remind students to re-read the question quietly on their own before they begin and revisit the question as they're working so that they stay on track and end up with a complete answer.
- Remind students to record all their work in writing and label the calculations for watermelon, strawberries... so that anyone can easily tell what their work is showing.

During: Can you prove to me that this is the most profitable combination of fruits and vegetables? Did you try any other possible solutions?

After: Choose 3-4 students to present their work to the class. I'm looking for students who tried multiple solutions and clearly explained their reasoning.

ASSESSMENT Observe: Since the students have to show multiple possible solutions as part of the activity I'm looking for students who tried any creative ideas they had (risk taking). I'm looking for any students who used a sketch or diagram as part of their solution.