School Store Shelves

3rd Grade Math Project · Shopping & Stores

Grade 3 · Advanced

Name: _____ Date: _____ Class: _____

The Challenge

You are the manager of the school store! New supplies arrived, and every item comes in equal packs or goes on the shelf in neat arrays.

You will make: Store Shelf Plan

I can…

- I can write a multiplication expression for equal groups and tell what each factor means.
- I can describe an array and find the total by multiplying.
- I can solve equal-group and array word problems with a drawing and an equation.

Materials

- Pencil
- Counters or cubes
- Grid paper

Steps

1. Part 1: Pencil Packs
2. Part 2: Eraser Display
3. Part 3: Store Problems
4. Part 4: Design Challenge
5. Check your work and share your store shelf plan.

Part 1: Pencil Packs

The store gets 7 packs of pencils. Each pack has 9 pencils.

Packs (groups)	Pencils in each pack	Total
7	9	

1. Draw 7 equal groups. How many pencils are in each group?

2. Write a multiplication expression for the pencils.

3. How many pencils are there in all?

Part 2: Eraser Display

Erasers are set out in an array with 6 rows and 8 erasers in each row.

4. How many erasers are in each row?

5. Write an equation for the array.

6. The display turns so it has 8 rows. How many in each row now?

Part 3: Store Problems

Use a drawing or an equation for each problem.

7. Markers come in boxes of 10. The store orders 6 boxes. How many markers?

8. Notebooks cost 5 dollars each. What is the cost of 7 notebooks and 3 folders that cost 2 dollars each?

Part 4: Design Challenge

The store has 36 glue sticks. Design shelf arrays that use ALL 36 with no extras.

9. List every array (rows × number in each row) that uses exactly 36 glue sticks.

10. A shelf holds at most 6 rows and 9 in each row. Which arrays fit?

11. Kai says 5 × 7 works because 5 + 7 is close to 36. Explain the mistake.

Extension Challenge

The store sells stickers in sheets of 4 rows of 5. A class buys 3 sheets. How many stickers?

How your project will be scored

Learning target	4 Exceeds	3 Meets	2 Approaching	1 Beginning
I can write a multiplication expression for equal groups and tell what each factor means.	Correct and complete; explains how	Mostly correct	Partly correct	Not yet
I can describe an array and find the total by multiplying.	Correct and complete; explains how	Mostly correct	Partly correct	Not yet
I can solve equal-group and array word problems with a drawing and an equation.	Correct and complete; explains how	Mostly correct	Partly correct	Not yet
I can explain my thinking with pictures, numbers and words.	Clear for every part	Clear for most parts	Some explanation	Little explanation
My store shelf plan is complete and matches my math.	Complete, neat, accurate	Complete	Partly complete	Not complete