School Garden Plan

5th Grade Math Project · Nature & Gardening

Grade 5 · Advanced

Name: _____ Date: _____ Class: _____

The Challenge

Our school is building a new garden, and your team gets to design it! Every section of the garden is a fraction of the whole.

You will make: Garden Design Map

What you will learn

- Add and subtract fractions with unlike denominators
- Add and subtract mixed numbers
- Use benchmark fractions to estimate and check

Materials

- Pencil
- Colored pencils
- Grid paper

How to do it

1. Part 1: Garden Sections
2. Part 2: Fence Lengths
3. Part 3: Stepping-Stone Path
4. Part 4: Garden Map
5. Check your work and share your garden design map.

Part 1: Garden Sections

The garden is one whole. Tomatoes: $\frac{2}{5}$, Beans: $\frac{1}{4}$, Flowers: $\frac{1}{6}$.

1. What fraction of the garden is planted?

2. What fraction is left for a bench area?

3. Use a benchmark to check: is the planted part more or less than $\frac{1}{2}$?

Part 2: Fence Lengths

The garden needs two fence pieces: $7\frac{3}{5}$ yards and $6\frac{1}{6}$ yards.

4. How many yards of fence in all?

5. How much longer is the first piece?

Part 3: Stepping-Stone Path

You have $11\frac{3}{4}$ feet of stepping stones. You use $4\frac{7}{12}$ feet for the first path.

6. How many feet are left?

Part 4: Garden Map

Draw your garden as a rectangle cut into sections. Label each section with its fraction and plant.

7. Do all your sections add to 1 whole?

⭐ Extension Challenge

Change two section sizes so the planted part is exactly $\frac{5}{6}$ of the garden. Show the math.

How your project will be scored

Category	4 Excellent	3 Good	2 Developing	1 Beginning
Math accuracy	All answers correct	Most answers correct	Some answers correct	Few answers correct
Shows work	Clear work for every step	Work for most steps	Some work shown	Little work shown
Explains thinking	Clear, complete explanations	Mostly clear explanations	Some explanation	Little explanation
Final product	Complete, neat and creative	Complete and neat	Partly complete	Not complete