

Plant Growth Investigation

5th Grade Math Project · Science & Data

Grade 5 · Advanced

Name: _____ Date: _____ Class: _____

The Challenge

Your class is a team of plant scientists! You planted seedlings and measured them. Now it's time to organize and understand the data.

You will make: Investigation Report

What you will learn

- Make a line plot with fraction measurements
- Use fraction operations to answer questions about data
- Find an equal share
- Communicate findings

Materials

- Pencil
- Ruler marked in 1/8 inches
- Grid or line plot template

How to do it

1. Part 1: Make a Line Plot
2. Part 2: Compare Heights
3. Part 3: Fair Share of Water
4. Part 4: Report
5. Check your work and share your investigation report.

Part 1: Make a Line Plot

Seedling heights (inches): $1\frac{3}{8}$, $1\frac{1}{2}$, $1\frac{3}{8}$, $2\frac{1}{8}$, $1\frac{3}{4}$, $1\frac{3}{8}$, $1\frac{5}{8}$, $1\frac{3}{4}$, $2\frac{1}{8}$, $1\frac{1}{2}$.

Height (in.)	Number of seedlings
$1\frac{3}{8}$	
$1\frac{1}{2}$	
$1\frac{5}{8}$	
$1\frac{3}{4}$	
$2\frac{1}{8}$	

1. Which height appears most often?

2. How many seedlings were measured?

Part 2: Compare Heights

3. What is the difference between the tallest and shortest seedling?

4. What is the total of all the heights?

Part 3: Fair Share of Water

Water in each cup (liters): $\frac{3}{4}$, $\frac{5}{8}$, $\frac{1}{4}$, $\frac{1}{2}$, $\frac{7}{8}$, 1.

5. What is the total amount of water?

6. If the water is shared equally among the cups, how much is in each cup?

Part 4: Report

Write a short report: what did you find out about the seedlings? Use at least two numbers from your line plot.

7. Report:

⭐ Extension Challenge

If every seedling grows another $\frac{1}{4}$ inch, what is the new total height of all the seedlings?

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