

Measure My Classroom

Teacher Guide · Solutions · Rubric

Grade 2 · All levels

Overview

Students measure real classroom objects. They choose rulers, yardsticks, meter sticks or measuring tapes, measure in two units, estimate first, compare lengths, and make a line plot of pencil lengths.

Time: 2 class periods · **Product:** Measurement Line Plot Poster
Standards: 2.MD.A.1, 2.MD.A.2, 2.MD.A.3, 2.MD.A.4, 2.MD.D.9
Prerequisite skills: Count and compare numbers within 100

Learning targets

- I can choose a tool and measure to the nearest whole unit.
- I can estimate and compare lengths.
- I can show measurements on a line plot.

Timing and materials

- Day 1 (40 min): estimate and measure objects in two units (Parts 1–2).
- Day 2 (40 min): compare lengths and make the line plot (Parts 3–4).

Materials: Rulers (inches and centimeters); Yardstick or meter stick; Measuring tape (paper tape works); Pencils of different lengths; Line plot frame (printable support page). No accounts, paid products or student personal information are needed.



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The three versions

- Remedial: hints for a first step, partly filled tables, sentence frames and fewer open choices; the same learning targets.
- Standard: the full task set at grade level; students choose their strategies and models.
- Advanced: open design constraints, missing information, error analysis and a written justification; no hints.

All versions use the same context and learning targets, so groups can share and compare work.

Implementation notes

- Check that every student starts at 0 on the ruler.
- Record estimates before measuring so students can compare.
- Advanced students explain why the inch and centimeter measurements are different numbers.
- Before Part 1, read the challenge aloud and ask students to restate the goal.
- Close with a gallery walk: each group explains one strategy.

Rubric

Learning target	4 Exceeds	3 Meets	2 Approaching	1 Beginning
I can choose a tool and measure to the nearest whole unit.	Correct and complete; explains how	Mostly correct	Partly correct	Not yet
I can estimate and compare lengths.	Correct and complete; explains how	Mostly correct	Partly correct	Not yet
I can show measurements on a line plot.	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 measurement line plot poster is complete and matches my math.	Complete, neat, accurate	Complete	Partly complete	Not complete



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Solutions · Remedial KEY

Part 1: Estimate, Then Measure

Estimate first. Then measure to the nearest inch.

Object	Estimate	Measure (inches)	Measure (centimeters)
crayon			
book			
desk			

1. Which tool will you use for a book? For the classroom door? For around a globe?
ruler; yardstick or meter stick; measuring tape

2. Measure a crayon. Start at 0. How long is it?
Answers vary (about 3 inches)

Part 2: Two Units

Measure the same book in inches and in centimeters.

3. Which number is greater: the inches or the centimeters? Why?
Centimeters, because a centimeter is shorter than an inch, so it takes more of them.

Part 3: How Much Longer?

The desk is 24 inches long. The book is 10 inches long.

4. How much longer is the desk than the book?
14 inches



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Part 4: Line Plot

The table shows pencil lengths in inches. Make a line plot.

Pencil	Length (inches)
1	5
2	6
3	6
4	7
5	7
6	7
7	8

5. Which length has the most pencils?

7 inches

6. How much longer is the longest pencil than the shortest?

3 inches

7. How many pencils were measured?

7

Extension

Add your own pencil to the line plot. Does the most common length change?

Answers vary.



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Solutions · Standard KEY

Part 1: Estimate, Then Measure

Estimate first. Then measure to the nearest inch.

Object	Estimate	Measure (inches)	Measure (centimeters)
crayon			
book			
desk			

1. Which tool will you use for a book? For the classroom door? For around a globe?
ruler; yardstick or meter stick; measuring tape

2. Measure a crayon. Start at 0. How long is it?
Answers vary (about 3 inches)

Part 2: Two Units

Measure the same book in inches and in centimeters.

3. Which number is greater: the inches or the centimeters? Why?
Centimeters, because a centimeter is shorter than an inch, so it takes more of them.

Part 3: How Much Longer?

The desk is 30 inches long. The book is 11 inches long.

4. How much longer is the desk than the book?
19 inches



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Part 4: Line Plot

The table shows pencil lengths in inches. Make a line plot.

Pencil	Length (inches)
1	4
2	5
3	5
4	6
5	6
6	6
7	7
8	7
9	8
10	8

5. Which length has the most pencils?
6 inches

6. How much longer is the longest pencil than the shortest?
4 inches

7. How many pencils were measured?
10



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Extension

Add your own pencil to the line plot. Does the most common length change?

Answers vary.



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Solutions · Advanced KEY

Part 1: Estimate, Then Measure

Estimate first. Then measure to the nearest inch.

Object	Estimate	Measure (inches)	Measure (centimeters)
crayon			
book			
desk			

1. Which tool will you use for a book? For the classroom door? For around a globe?
ruler; yardstick or meter stick; measuring tape

2. Measure a crayon. Start at 0. How long is it?
Answers vary (about 3 inches)

Part 2: Two Units

Measure the same book in inches and in centimeters.

3. Which number is greater: the inches or the centimeters? Why?
Centimeters, because a centimeter is shorter than an inch, so it takes more of them.

Part 3: How Much Longer?

The desk is 36 inches long. The book is 9 inches long.

4. How much longer is the desk than the book?
27 inches



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Part 4: Line Plot

The table shows pencil lengths in inches. Make a line plot.

Pencil	Length (inches)
1	3
2	4
3	5
4	5
5	6
6	6
7	6
8	6
9	7
10	7
11	8
12	9

5. Which length has the most pencils?

6 inches

6. How much longer is the longest pencil than the shortest?

6 inches

7. How many pencils were measured?

12



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Part 5: Measure Check

Explain your thinking.

8. Uma measured a ribbon from the 2 mark to the 9 mark and said it is 9 inches. What is its real length?

7 inches (9 − 2)

9. A table is 2 meters long. About how many centimeters is that? Explain.

200 centimeters, because 1 meter is 100 centimeters.

Extension

Add your own pencil to the line plot. Does the most common length change?

Answers vary.