

Investigations

Book: Measurement Benchmarks

Session: 2

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1. Concept:

- Recognizing uses of benchmarks to estimate measures
- Recognizing and explaining possible sources of measurement error
- Listing measures of length and distance

2. CSOs:

M.O.5.4.1

M.O.5.4.5

3. Technique/Procedure/Introduction/Set:

- Try Ten-Minute Math activity for Estimation and Number Sense.
- Use student's work at measuring centers in the previous session to introduce the use of benchmarks for various units of measure.
- Make a two column chart on a piece of chart paper for Measures of Length and Distance. Label Accordingly.
- Have class discussion on tools used to find estimation of lengths previously taught.
- Re-teach the meaning of benchmarks and give definition. Give examples.
- Collect two or three ideas for benchmarks for a meter and a centimeter and add them to the chart.
- Spend little time talking about possible benchmarks for other measures (time, weight, and liquid quantity).
- Discuss students' findings for benchmarks found in centers for a pound. What can they find at home or in the store that are about as heavy as a pound or as long as a foot?
- Post chart in a convenient place where students may add to it later in this investigation.
- Record on the board a few lengths that students can estimate from or near their seats.
- Use your benchmarks to estimate these:
 1. the width of a pencil
 2. the width of your desk
 3. the height of your desk
 4. the length of your notebook
 5. the width of the classroom window
 6. your height
- Distribute Student Sheet 2 and students will work in pairs to estimate each of the lengths listed on the board.
- Encourage discussion and when everyone has finished, compare estimates.

Closure:

Draw attention to the chart started at the beginning of the session. Ask students what other measures of length and distance there are besides meters and centimeters. Record students' suggestions in the units column. Students may notice that the same measurement units can be used for length, width, height, depth, and longer distances.

Homework:

Send home Family Letter and Student Sheet 3, When and How do you Measure? Using the questions on Student Sheet 3 to guide them, students talk to one or more adults to find at least three situations in which they measure.

Students should look for two different situations using measuring tools and estimation.

4. Today's Math/Assessment:

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5. Materials:

- Student Sheet 2 (1 per student)
- Student Sheet 3 (1 per student, Homework)
- Chart Paper
- Family Letter (1 per student)

6. Vocabulary:

Benchmarks
Width
Height
Millimeter
Centimeter
Foot