Linear Measurement
Unit 3 Summary
Using Units to Measure Distance

In this lesson students will understand that length measurement is a distance traveled from zero and results from using a unit over and over (iteration).

You will need:

- Rules of Measurement Anchor chart from Unit 2
- Enough cutouts of your foot traced on paper for groups/pairs to each have one
- Paper strips- 5 for each group/pair
- Scissors for students
- Post-it Notes
- Classroom carpet space or other area to measure
- 4 sets of strips of paper for measurement stations- cut each to the following lengths:
    - A- 8 teacher foot units long
    - B- 4 teacher foot units long
    - C- 2 ½ teacher foot units long
    - D- ½ teacher foot units long
- Recording sheets for measurement stations

Experience:

- Review the anchor chart with students.
- Tell students that today they are going to work with a partner to measure the carpet in the classroom so that the principal can order a new one. They are going to use only their feet to measure and try to follow all the rules of measurement that the agreed on last time. Ask students to predict if we will all get the same measures.
- Watch students as they measure (good chance for formative assessment) and have each group record their measure on a Post-it note and put it on the board.
- Ask students why we got different answers (someone didn't follow the rules, we have different size feet). Hopefully they will come up with the need for using a standard unit.
- Show students the cut out of the teacher foot. Ask students how they could make a strip of paper stand in for the foot.
- Give each pair of students one copy of the teacher's foot cut out and five strips of paper longer than the foot. Have them cut the strips to the length of the teacher's foot. These are now their measurement tool.
- Set up stations in the classroom where students can work with a small group or with a partner to measure strips of paper- A, B, C, D. Split students into groups and send them to the stations (they need only to visit one station as they are all the same).
    - For A- it is 8 teacher foot units long- students will need to re-use units in order to get the measurement
    - For B- it is 4 teacher foot units long
    - For C- it is 2 ½ teacher foot units long. Students will have to think about halves here…
    - For D- it is ½ teacher foot unit long. Same as C.

Standards addressed: 2.MD.1, 2.MD.2

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- As students measure, make notes of what they do. Think about who you want to share in the discussion.
- Discussion- have students demonstrate how they measured each of the strips. If there are still problems with gaps and overlaps, make sure to address it. If there are issues with straight, exaggerate with a zig zag measurement and ask if that is okay.
- With A- students will have to reuse the unit. Have students demonstrate how they did so and how they kept track.
- There will be issues with the ½, expect that there will be (this will be addressed in the next Unit). For C- they will say 3 and ½ because it is half way on the 3rd unit. Change the language to 2 and some more.

Optional: After the discussion- give students the formative assessment (found in the original Rich Lehrer Unit).

Standards addressed: 2.MD.1, 2.MD.2